



Durham E-Theses

Ancient Egyptian fauna : a lexicographical study.

Wassell, Belinda Ann

How to cite:

Wassell, Belinda Ann (1991) *Ancient Egyptian fauna : a lexicographical study.*, Durham theses, Durham University. Available at Durham E-Theses Online: <http://etheses.dur.ac.uk/1152/>

Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a [link](#) is made to the metadata record in Durham E-Theses
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the [full Durham E-Theses policy](#) for further details.

Ancient Egyptian Fauna : a lexicographical study

(Two volumes)

Volume 1

Belinda Ann Wassell

Thesis submitted for the degree of doctor of
philosophy to the University of Durham.

School of Oriental Studies, 1991.

The copyright of this thesis rests with the author.
No quotation from it should be published without
his prior written consent and information derived
from it should be acknowledged.



26 AUG 1992

Ancient Egyptian Fauna : a lexicographical study

PhD : 1990

Belinda Ann Wassell

This thesis has sought to assemble and evaluate a comprehensive corpus of texts and secondary material relating to the fauna of ancient Egypt. It is in the first instance a philological study, using as a starting point the Wörterbuch der ägyptischen Sprache produced in the 1920s and '30s, though evidence from archaeological and representational material has been included where appropriate.

Previous work in this field has been sporadic and of varying quality. Much of it is not recent or is based on older reference sources. It therefore seemed appropriate to attempt a compilation and updating of existing studies. Much effort has been put into using recent zoological works to provide lists of species from modern Egypt with which to compare both the ancient records and the taxonomic information given in other Egyptological studies.

The thesis is divided into 20 chapters. The first examines, by way of introduction to the rest of the study, aspects of zoological classification in ancient Egypt, making comparisons with work carried out by anthropologists on classificatory systems used by modern 'primitive' cultures. The remainder of the thesis is divided into three parts. The first, comprising chapters 2 to 14, examines the names given by the ancient Egyptians to various mammals; each chapter discusses a certain group of mammals (eg Cattle; Dogs and Similar Animals; Lions and Other Cats). The second part, comprising chapters 15 to 17, concerns birds. Part three comprises chapters 18 to 20 on fish, reptiles and amphibians, and insects respectively.

The advantage of this type of study lies in the avoidance of translations formulated in isolation from related material. Altogether some 600 animal names, spanning c.3000 to 500 BC, have been discussed; a number of previous translations have been revised and many new or more precise translations suggested.

No material contained within this thesis has previously been submitted for a degree in this or any other University.

The copyright of this thesis rests with the author. No quotation from it should be published without her prior written consent and information derived from it should be acknowledged.

Contents

Volume 1 : Text

	<u>Page</u>
List of Abbreviations	i-iv
Introduction	1
Chapter 1: Classification of the Animal Kingdom in Ancient Egypt	6
PART 1 : MAMMALS	
Chapter 2 : Antelopes and Similar Animals	20
3 : Bats	28
4 : Cattle	31
5 : Dogs and Similar Animals	46
6 : Elephant, Rhino and Hippo	54
7 : Goats	59
8 : Horse and Donkey	63
9 : Lions and Other Cats	69
10 : Monkeys	75
11 : Pigs	81
12 : Sheep	83
13 : Miscellaneous Mammals (A)	86
14 : Miscellaneous Mammals (B)	98
PART 2 : BIRDS	
15 : Waterbirds	108
16 : Birds of Prey	125
17 : Miscellaneous Birds	130
PART 3 : OTHER ANIMALS	
18 : Fish	139
19 : Reptiles and Amphibians	145
20 : Insects	157
Bibliography	169
Index	210

Volume 2 : Notes

	<u>Page</u>
Notes to Introduction	1
Notes to Chapter 1	4
2	53
3	83
4	88
5	156
6	176
7	191
8	208
9	249
10	278
11	309
12	325
13	337
14	368
15	382
16	452
17	487
18	530
19	568
20	623

List of Abbreviations

For abbreviated forms of articles and monographs cited in the thesis see the Bibliography at the end of the text.

General

Ar.	= Arabic
cf	= <u>confer</u> , compare
col.	= column(s)
DAI	= Das Deutsche Archäologische Institut, Kairo
det.	= determinative
Dyn	= Dynasty
ed.	= edition, edited (by)
EES	= Egypt Exploration Society
eg	= <u>Exempli gratia</u> , for example
esp.	= especially
etc.	= <u>et cetera</u> , and so on
IFAO	= L'Institut Français d'Archéologie Orientale
<u>id.</u>	= idem
ie	= <u>id est</u> , that is
IP	= Intermediate Period
fem.	= feminine
fig.	= figure(s)
frag.	= fragment
Fs	= Festschrift
Gr.	= Greek
l.	= line(s)
LP	= Late Period
masc.	= masculine
max	= maximum
MK	= Middle Kingdom
ms	= manuscript
n.	= note(s)
NK	= New Kingdom
no.	= number
OK	= Old Kingdom
p.	= page(s)
P.	= papyrus
pl.	= plate(s)
pt.	= part(s)
publ.	= published (by)

rep(s)	= representation(s)
rto	= <u>recto</u>
rev.	= revised
suppl.	= supplement
tr.	= translated (by)
vol.	= volume
vso	= <u>verso</u>

Periodicals & Series

<u>ÄF</u>	Ägyptologische Forschungen
<u>AFO</u>	Archiv für Orientforschung
<u>AJA</u>	American Journal of Archaeology
<u>AnOr</u>	Analecta Orientalia
<u>ASAE</u>	Annales du Service des Antiquités d'Égypte
<u>BdE</u>	Bibliothèque d'Étude
<u>BIE</u>	Bulletin de l'Institut d'Égypte
<u>BIFAO</u>	Bulletin de l'Institut Français d'Archéologie Orientale du Caire
<u>BiOr</u>	Bibliotheca Orientalis
<u>BSEG</u>	Bulletin de la Société d'Égyptologie de Genève
<u>BSFE</u>	Bulletin de la Société Française d'Égyptologie
<u>CdE</u>	Chronique d'Égypte
<u>FIFAO</u>	Fouilles de l'Institut Français d'Archéologie Orientale du Caire
<u>GLECS</u>	Groupe Linguistique d'Études Chamito-Sémitiques
<u>GM</u>	Göttinger Miszellen
<u>HÄB</u>	Hildesheimer Ägyptologische Beiträge
<u>HAS</u>	Harvard African Studies
<u>JARCE</u>	Journal of the Americal Research Centre in Egypt
<u>JEA</u>	Journal of Egyptian Archaeology
<u>JNES</u>	Journal of Near Eastern Studies
<u>JRAS</u>	Journal of the Royal Asiatic Society of Great Britain and Ireland
<u>KDVS</u>	Der Kongelige Danske Videnskabernes Selskab, Historisk-filologiske Meddelelser
<u>MÄS</u>	Münchner Ägyptologische Studien
<u>MDAIK</u>	Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo
<u>MIE</u>	Mémoires de l'Institut d'Égypte
<u>MIFAO</u>	Mémoires publiés par les Membres de l'Institut Français d'Archéologie Orientale du Caire
<u>MMAF</u>	Mémoires publiés par les Membres de la Mission Archéologique Française au Caire
<u>NAWG</u>	Nachrichten von der Akademie der Wissenschaften zu Göttingen, Phil-hist Klasse
<u>OLZ</u>	Orientalistische Literaturzeitung
<u>OMRO</u>	Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden te Leiden
<u>PSBA</u>	Proceedings of the Society of Biblical Archaeology

<u>RdE</u>	Revue d'Égyptologie
<u>Rec.Trav.</u>	Recueil de Travaux relatifs à la Philologie et à l'Archéologie égyptiennes et assyriennes
<u>RHR</u>	Revue de l'Histoire des Religions
<u>SAK</u>	Studien zur Altägyptischen Kultur
<u>SBAW</u>	Sitzungsberichte der Bayerischen Akademie der Wissenschaften, Phil-hist Abteilung
<u>SPAW</u>	Sitzungsberichte der Preussischen Akademie der Wissenschaften, Phil-hist Klasse
<u>Unt</u>	Untersuchungen zur Geschichte und Altertumskunde Ägyptens
<u>WZKM</u>	Wiener Zeitschrift für die Kunde des Morgenlandes
<u>ZÄS</u>	Zeitschrift für ägyptische Sprache
<u>ZDMG</u>	Zeitschrift der Deutschen Morgenländischen Gesellschaft

INTRODUCTION

Egypt provides unique evidence on the existence and naming of an ancient fauna. Reliefs and paintings, especially those of the Old and Middle Kingdoms, illustrate a diverse mammal-, fish- and avifauna. The hieroglyphic script itself, representing a number of basic sounds with the figures of animals and comprising many other animal figures as determinatives, gives an insight into the importance of the animal world for the ancient Egyptians not offered by other languages.

In the past, studies of the fauna of ancient Egypt have been somewhat haphazard. Modern publications, notably those of Störk, Boessneck, Gamer-Wallert and Brunner-Traut, are, like the older works, of varying emphasis and quality. The first collection of animal names was made by Hartmann in 1864; he gave translations of some 30 terms.¹ Later, more specific, studies were made by, for example, Gaillard² and Loret,³ whose interest and sponsorship prompted the extensive and generally excellent work of Keimer on a wide range of subjects.⁴ Keimer had hoped to write a 'grand ouvrage' covering the whole field of botany and zoology in ancient Egypt⁵ - a similar wish was also expressed by de Rachewiltz⁶ - but neither lived to fulfil their ambitions.

There seems to be a case, therefore, for producing a work which brings together all recorded animal names, together with references to the studies made of them, and also to update and evaluate this material. Particular attention has been paid in this study to the recent zoological record, as this subject has (as Keimer noted)⁷ been much neglected in the past. Nevertheless it does not aim to be a complete zoological treatise, and archaeological evidence, which would furnish information on fauna both during and before dynastic times, has been ignored except where of particular interest. It is often difficult to know how far to trust identifications proffered in archaeological works, especially the older studies, yet it would require a considerable degree of zoological and palaeontological knowledge to check or revise them. Such a study is beyond the scope of this thesis but is a subject which would repay further investigation.⁸

The assembling of a complete corpus of texts pertaining to animal names would be a vast task and various restrictions have been placed on the body of material presented here. Greco-Roman temple inscriptions and demotic texts, which form (from the point of view of grammar and orthography) discrete groups of documents, have only been cited where



comparative references are of especial interest. A similar position has been adopted with regard to Coptic material. This has resulted in a restriction of the period from which references have been taken to c.3000 to 500 BC. This has the further effect of excluding certain animals which, although now considered typically Egyptian, were not introduced into Egypt until after those dates, such as the camel.

Symbolism has been considered to a limited degree only and a distinction has been drawn between those animal names which occur solely in 'rational' texts (for example, those recording historical or medical information) and those which are attested exclusively in texts of a religious nature (such as the books concerning the Underworld). Thus 'Fabeltiere' are not considered, and a number of the names of snakes from the Underworld recorded by Wb, many of which appear to have solely descriptive or epithetical force, have been omitted.⁹

The use of an ancient language as the basis for any study entails specific problems. Texts are inevitably limited in number and can be preserved from sometimes widely differing dates and provenances. Dialectal variations may be undetectable or easily misinterpreted.¹⁰ A word's meaning may change dramatically over a decade, yet translations may rest on only a few attestations scattered over several centuries. Deduced meanings cannot be checked by asking native speakers.

The search for translations of animal names in the face of these difficulties has often led to the comparison of Egyptian words with those of other languages, notably Semitic languages, Coptic and, via Coptic, Greek and Arabic. Weeks¹¹ has recently drawn attention to the dangers of being influenced by one's own culture when attempting translations, and the same can be said of the influences of other - even ancient - cultures. The relationship between these languages is extremely complex (and inadequately researched) and simple comparisons do not take into account these complexities, although they may be of some use when all other evidence is lacking.

There is a certain element of chance at work in the preservation of records in any ancient language. In Egypt literature of a religious nature far outweighs other texts surviving from ancient times, and this will inevitably have restricted the type and number of animal names to have been preserved. Many animal names must have been used which are not to be found in the extant texts. The highly specialised medical corpus contains many terms unknown from other sources and the same can

be said of the unusual tomb paintings at Beni Hasan which show birds not depicted or named elsewhere; these examples indicate that other specialised texts (had they survived) would also reveal their own specific terms. Many names are found largely, if not solely, in descriptions of kings or gods - obviously not all animals are suitable for such comparisons.

The translation of animal names is both aided and hindered by the representations which survive from ancient Egypt. Loret believed that collecting all the representations of animals would result in a complete record of the ancient fauna.¹² This is undoubtedly untrue; species lists from modern Egypt generally show a very much greater diversity than the ancient records, pictorial or textual.¹³ Although the Egyptians divided the animal kingdom into classes of beings they did not develop the systematic analysis of the modern Linnaean classification. The animals drawn and named were those of greatest significance; for example, cattle were frequently shown and were assigned a great variety of names but the zoologically vast class of insects received little attention.¹⁴

In many instances animals were depicted accompanied by their names, though in some cases it is obvious that the wrong name has been chosen. In other cases, especially when a word is but infrequently attested, it can be difficult to decide whether the association of picture and name is to be trusted.¹⁵ In yet other cases the representation itself may be unhelpful, either because it is badly drawn by an inept artist or so stylised that the animal is unrecognisable. In general, the Egyptians did not draw animals purely out of scientific curiosity (the Beni Hasan paintings mentioned above seem to be a notable exception) and this should be borne in mind when interpreting the tomb scenes.

This last point is seldom taken into account by climatologists who have referred to evidence from Egypt when reconstructing the palaeoclimate of Africa.¹⁶ It is known from rock drawings in the central Sahara that this desert at one time supported abundant life, both human and animal, on extensive watercourses, and it is evident that considerable desiccation has led to the desert conditions prevailing today. The Saharan rock drawings and the reliefs of ancient Egypt have been used to date the progress and degree of this desiccation, since they show animals which are no longer native to northern Africa, but only to more temperate regions. Old and Middle Kingdom Egyptian scenes have been held to support the theory of a

'Neolithic wet phase' in the third millennium BC when savannah conditions prevailed in now arid areas;¹⁷ Butzer¹⁸ in particular has concentrated on the relationships between climatic fluctuations and Egyptian evidence, though not without receiving considerable criticism.¹⁹

The animals of ancient Egypt have undoubtedly not succumbed to climatic change alone but also to the effects of man; indeed some of the species depicted in ancient reliefs and paintings became extinct in Egypt only in the last century or at the beginning of this.²⁰ Hunting may well have eliminated species such as the fallow deer and bear before the climate could affect what may in any case already have been marginal populations²¹ supported only by locally favourable conditions.²²

The evidence is also distorted by the varied provenance of the representations. Old Kingdom records tend to be from the Memphite area in the north of the country, where the king and capital were established, an area cooler and wetter than other parts of Egypt. Middle and New Kingdom sources from more southerly, drier, areas inevitably show a more restricted fauna.

As Shaw²³ has pointed out, there are a number of problems associated with the interpretation of pictorial data, especially in view of the present paucity of knowledge about animal ecology and the extent to which animals (particularly large animals) - and, therefore, pictures of animals - are a reliable indicator of environmental conditions.²⁴ Ancient Egyptian art, being static rather than dynamic, is particularly prone to misinterpretation - depictions of animals may have been copied from tomb to tomb because of their suitability as subject matter rather than because the artist drew his inspiration from life.²⁵ Textual evidence is similarly unreliable. Phrases such as 'roaring like a leopard' can obviously survive in a language long after the animal of the simile has disappeared. This is even more the case with texts which use archaising language or are rigid in their phraseology, such as those describing the exploits of New Kingdom pharaohs.

Despite these reservations the Egyptian evidence is of considerable interest in the study of climate and zoogeography, giving at least some indication of faunal movement since the beginning of the third millennium BC. Even today the Nile Valley is regarded as an important

transitional zone between the Palaearctic and Ethiopian faunal regions²⁶ and this importance seems to have been even greater during dynastic times. The presence in Egypt of now purely Palaearctic species, such as the fallow deer and bear, and purely sub-Saharan forms, such as the baboon and African elephant, attest to this. It is notable that some species were absent from ancient records which, because of their present distribution, would have been expected to occur. The zebra today shares much of the same habitat as the giraffe, which was known to the ancient Egyptians, yet was not encountered by them even on their journeys to the more southerly land of Punt. Accurate analysis of faunal remains would certainly help to clarify the pattern of - and perhaps be able to suggest reasons for - ancient distributions and increase current understanding of animal ecology.

As the title of this study indicates, information on Egyptian fauna has been taken in the first instance from written records. Material was collected initially from the Wörterbuch der ägyptischen Sprache, and was supplemented from the original record slips of this dictionary in Berlin and from other dictionaries and collections, notably Meeks' Année Lexicographique.

Some 600 words are discussed in 20 chapters, arranged, for ease of reference, with words denoting similar animals grouped together. An index of terms indicates the pages where the main discussion of the term (or animal) takes place. The Bibliography is arranged in four sections. Those sections concerned with zoological and Egyptological works contain both abbreviated and full references. Other references, which appertain only to single or small groups of words or animals, are cited in full in the appropriate place in the text. They may be found by referring to the Index for the animal name in question.

I wish to thank many people for their assistance in bringing this study into existence: my supervisor, Dr.W.J.Tait; the staff of the libraries of the University of Durham and the Griffith Institute, Oxford; the staff of the DAI, Cairo; all those 'im Wörterbuch' at the Akademie der Wissenschaften in (East) Berlin, especially Dr.A.Burkhardt and Dr.C.Tietze; and my infinitely patient typists, Mr.G. & Mrs.F. Lawson. My thanks go particularly to the relatives and friends who have supported and sustained my endeavours, and to whom this thesis is dedicated.

Chapter 1 : Zoological Classification in Ancient Egypt

Research since the 1950s into folk biosystematics, 'prescientific man's classification of his biological universe',¹ has indicated a considerable degree of consistency in the ways in which societies categorize the animals with which they are familiar.

The most inclusive category, which has been termed the 'unique beginner',² and which corresponds to English 'animal', is seldom named in pre-scientific classificatory systems, even if the category is perceived: there may be no single term for 'plant' or 'animal' in a language, though 'plants' and 'animals' are never confused. The next most inclusive categories are almost always named. These 'life form' groups are, in English, 'mammal', 'bird', 'fish', 'reptile', 'insect'. Work done on these 'life form' terms suggests that these categories are universally recognised, though not all need be named.³ The life form classes most commonly named are those focusing on birds, fish and snakes. The next most commonly named class focuses largely, but seldom exclusively, on insects (it may comprise, for example, other small creatures such as worms or frogs). The 'mammal' class is 'encoded' last of all, probably because of the greater visibility and (economic) importance of mammals to man - the distinction horse/pig may be as significant to man as fish/bird.⁴

No work has been carried out previously on zoological classifications in ancient languages, though various studies of animal names in Greek, Latin, Akkadian and Hebrew do exist.⁵ Despite the disadvantages of using a 'dead' language as a data base - there can be no truly objective way of checking evidence, which in itself is distorted by chance of survival - it is of interest to see whether the ancient material corroborates the modern. Ancient Egyptian does seem to provide notable parallels.

A demotic myth describing the griffin notes that its body was made up of parts of various creatures, including man (Spiegelberg's translation⁶): 'Da sagte der Hör-Vogel zu dem Seh-Vögel : In Wahrheit (XV,I) weißt du nicht, daß der Greif der ...[...] ist, der Hirt von allem, was (2) auf Erden ist, der Vergelter, dem kein Vergelter vergilt? Sein Schnabel ist der des Falken, seine Augen (3) die eines Menschen, sein Leib der eines Löwen, seine Ohren wie des Chenfi-Fisches (oder) des 3b3h-Fisches des Meeres, (4) sein Schwanz der einer Schlange'. These creatures are called 'the five that draw breath upon

the earth' and this has been adduced as evidence that the Egyptians employed a system of 'five-fold classification', ie man, mammal, bird, fish and snake, to categorize all living things.⁷

A number of texts from the Middle and New Kingdoms, many of them hymns recounting the creation of the world, do indeed specifically name categories of animal often corresponding in some degree to the life form classes identified by anthropologists:

1. P. Ermitage 1116A, rto 1.132-133:⁸



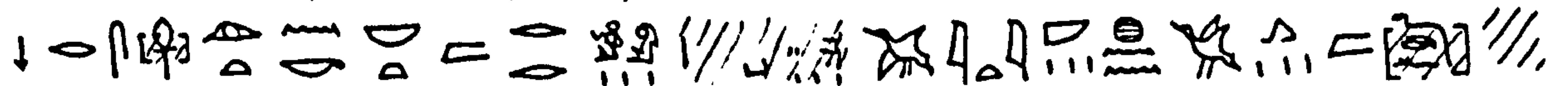
'He [Shu, as creator god] created for them [mankind] plants, (wt, (3pdw) and rmw to feed them'.

2. Turin Stela No.104, 1.4:⁹



recording some kind of census 'de tous les boeufs, de tout la volaille, de tout le petit bétail'.

3. Amarna I, 36 (= LD III, 97a):



tr. Davies, p.50: 'to give life to all that thou hast made, viz. mankind, cattle, flying and fluttering things, with [all kinds] of reptiles which are on the earth ' (reading ddft nbt nty).

4. Amarna III, 29:



tr. Davies, Amarna, p.31: 'viz. all mankind, [cattle] flying and fluttering things [with] all kinds of reptiles which are on the earth'.

5. Amarna IV, 32:



tr. Davies, p.28: 'mankind and all herds and flocks, and the trees which grow on the ground'.

6. Bibl Nat 20, 11 (hymn to Osiris):



'all his mnmnt, all things which fly (up), all things which fly down, his ddft, his (wt of the desert'.¹⁰

7. P. Tur PuR 131, 13 (= HQ I, pl.3, No.2: O. Petrie 7):

















𓆎𓆏𓆐𓆑𓆒𓆓𓆔𓆕𓆖𓆗𓆘𓆙𓆚𓆛𓆜𓆝𓆞𓆟𓆠𓆡𓆢𓆣𓆤𓆥𓆦𓆧𓆨𓆩𓆪𓆫𓆬𓆭𓆮𓆯𓆰𓆱𓆲𓆳𓆴𓆵𓆶𓆷𓆸𓆹𓆺𓆻𓆼𓆽𓆾𓆿𓇀𓇁𓇂𓇃𓇄𓇅𓇆𓇇𓇈𓇉𓇊𓇋𓇌𓇍𓇎𓇏𓇐𓇑𓇒𓇓𓇔𓇕𓇖𓇗𓇘𓇙𓇚𓇛𓇜𓇝𓇞𓇟𓇠𓇡𓇢𓇣𓇤𓇥𓇦𓇧𓇨𓇩𓇪𓇫𓇬𓇭𓇮𓇯𓇰𓇱𓇲𓇳𓇴𓇵𓇶𓇷𓇸𓇹𓇺𓇻𓇼𓇽𓇾𓇿𓈀𓈁𓈂𓈃𓈄𓈅𓈆𓈇𓈈𓈉𓈊𓈋𓈌𓈍𓈎𓈏𓈐𓈑𓈒𓈓𓈔𓈕𓈖𓈗𓈘𓈙𓈚𓈛𓈜𓈝𓈞𓈟𓈠𓈡𓈢𓈣𓈤𓈥𓈦𓈧𓈨𓈩𓈪𓈫𓈬𓈭𓈮𓈯𓈰𓈱𓈲𓈳𓈴𓈵𓈶𓈷𓈸𓈹𓈺𓈻𓈼𓈽𓈾𓈿𓉀𓉁𓉂𓉃𓉄𓉅𓉆𓉇𓉈𓉉𓉊𓉋𓉌𓉍𓉎𓉏𓉐𓉑𓉒𓉓𓉔𓉕𓉖𓉗𓉘𓉙𓉚𓉛𓉜𓉝𓉞𓉟𓉠𓉡𓉢𓉣𓉤𓉥𓉦𓉧𓉨𓉩𓉪𓉫𓉬𓉭𓉮𓉯𓉰𓉱𓉲𓉳𓉴𓉵𓉶𓉷𓉸𓉹𓉺𓉻𓉼𓉽𓉾𓉿𓊀𓊁𓊂𓊃𓊄𓊅𓊆𓊇𓊈𓊉𓊊𓊋𓊌𓊍𓊎𓊏𓊐𓊑𓊒𓊓𓊔𓊕𓊖𓊗𓊘𓊙𓊚𓊛𓊜𓊝𓊞𓊟𓊠𓊡𓊢𓊣𓊤𓊥𓊦𓊧𓊨𓊩𓊪𓊫𓊬𓊭𓊮𓊯𓊰𓊱𓊲𓊳𓊴𓊵𓊶𓊷𓊸𓊹𓊺𓊻𓊼𓊽𓊾𓊿𓋀𓋁𓋂𓋃𓋄𓋅𓋆𓋇𓋈𓋉𓋊𓋋𓋌𓋍𓋎𓋏𓋐𓋑𓋒𓋓𓋔𓋕𓋖𓋗𓋘𓋙𓋚𓋛𓋜𓋝𓋞𓋟𓋠𓋡𓋢𓋣𓋤𓋥𓋦𓋧𓋨𓋩𓋪𓋫𓋬𓋭𓋮𓋯𓋰𓋱𓋲𓋳𓋴𓋵𓋶𓋷𓋸𓋹𓋺𓋻𓋼𓋽𓋾𓋿𓌀𓌁𓌂𓌃𓌄𓌅𓌆𓌇𓌈𓌉𓌊𓌋𓌌𓌍𓌎𓌏𓌐𓌑𓌒𓌓𓌔𓌕𓌖𓌗𓌘𓌙𓌚𓌛𓌜𓌝𓌞𓌟𓌠𓌡𓌢𓌣𓌤𓌥𓌦𓌧𓌨𓌩𓌪𓌫𓌬𓌭𓌮𓌯𓌰𓌱𓌲𓌳𓌴𓌵𓌶𓌷𓌸𓌹𓌺𓌻𓌼𓌽𓌾𓌿𓍀𓍁𓍂𓍃𓍄𓍅𓍆𓍇𓍈𓍉𓍊𓍋𓍌𓍍𓍎𓍏𓍐𓍑𓍒𓍓𓍔𓍕𓍖𓍗𓍘𓍙𓍚𓍛𓍜𓍝𓍞𓍟𓍠𓍡𓍢𓍣𓍤𓍥𓍦𓍧𓍨𓍩𓍪𓍫𓍬𓍭𓍮𓍯𓍰𓍱𓍲𓍳𓍴𓍵𓍶𓍷𓍸𓍹𓍺𓍻𓍼𓍽𓍾𓍿𓎀𓎁𓎂𓎃𓎄𓎅𓎆𓎇𓎈𓎉𓎊𓎋𓎌𓎍𓎎𓎏𓎐𓎑𓎒𓎓𓎔𓎕𓎖𓎗𓎘𓎙𓎚𓎛𓎜𓎝𓎞𓎟𓎠𓎡𓎢𓎣𓎤𓎥𓎦𓎧𓎨𓎩𓎪𓎫𓎬𓎭𓎮𓎯𓎰𓎱𓎲𓎳𓎴𓎵𓎶𓎷𓎸𓎹𓎺𓎻𓎼𓎽𓎾𓎿𓏀𓏁𓏂𓏃𓏄𓏅𓏆𓏇𓏈𓏉𓏊𓏋𓏌𓏍𓏎𓏏𓏐𓏑𓏒𓏓𓏔𓏕𓏖𓏗𓏘𓏙𓏚𓏛𓏜𓏝𓏞𓏟𓏠𓏡𓏢𓏣𓏤𓏥𓏦𓏧𓏨𓏩𓏪𓏫𓏬𓏭𓏮𓏯𓏰𓏱𓏲𓏳𓏴𓏵𓏶𓏷𓏸𓏹𓏺𓏻𓏼𓏽𓏾𓏿𓐀𓐁𓐂𓐃𓐄𓐅𓐆𓐇𓐈𓐉𓐊𓐋𓐌𓐍𓐎𓐏𓐐𓐑𓐒𓐓𓐔𓐕𓐖𓐗𓐘𓐙𓐚𓐛𓐜𓐝𓐞𓐟𓐠𓐡𓐢𓐣𓐤𓐥𓐦𓐧𓐨𓐩𓐪𓐫𓐬𓐭𓐮𓐯𓐰𓐱𓐲𓐳𓐴𓐵𓐶𓐷𓐸𓐹𓐺𓐻𓐼𓐽𓐾𓐿𓑀𓑁𓑂𓑃𓑄𓑅𓑆𓑇𓑈𓑉𓑊𓑋𓑌𓑍𓑎𓑏𓑐𓑑𓑒𓑓𓑔𓑕𓑖𓑗𓑘𓑙𓑚𓑛𓑜𓑝𓑞𓑟𓑠𓑡𓑢𓑣𓑤𓑥𓑦𓑧𓑨𓑩𓑪𓑫𓑬𓑭𓑮𓑯𓑰𓑱𓑲𓑳𓑴𓑵𓑶𓑷𓑸𓑹𓑺𓑻𓑼𓑽𓑾𓑿𓒀𓒁𓒂𓒃𓒄𓒅𓒆𓒇𓒈𓒉𓒊𓒋𓒌𓒍𓒎𓒏𓒐𓒑𓒒𓒓𓒔𓒕𓒖𓒗𓒘𓒙𓒚𓒛𓒜𓒝𓒞𓒟𓒠𓒡𓒢𓒣𓒤𓒥𓒦𓒧𓒨𓒩𓒪𓒫𓒬𓒭𓒮𓒯𓒰𓒱𓒲𓒳𓒴𓒵𓒶𓒷𓒸𓒹𓒺𓒻𓒼𓒽𓒾𓒿𓓀𓓁𓓂𓓃𓓄𓓅𓓆𓓇𓓈𓓉𓓊𓓋𓓌𓓍𓓎𓓏𓓐𓓑𓓒𓓓𓓔𓓕𓓖𓓗𓓘𓓙𓓚𓓛𓓜𓓝𓓞𓓟𓓠𓓡𓓢𓓣𓓤𓓥𓓦𓓧𓓨𓓩𓓪𓓫𓓬𓓭𓓮𓓯𓓰𓓱𓓲𓓳𓓴𓓵𓓶𓓷𓓸𓓹𓓺𓓻𓓼𓓽𓓾𓓿𓔀𓔁𓔂𓔃𓔄𓔅𓔆𓔇𓔈𓔉𓔊𓔋𓔌𓔍𓔎𓔏𓔐𓔑𓔒𓔓𓔔𓔕𓔖𓔗𓔘𓔙𓔚𓔛𓔜𓔝𓔞𓔟𓔠𓔡𓔢𓔣𓔤𓔥𓔦𓔧𓔨𓔩𓔪𓔫𓔬𓔭𓔮𓔯𓔰𓔱𓔲𓔳𓔴𓔵𓔶𓔷𓔸𓔹𓔺𓔻𓔼𓔽𓔾𓔿𓕀𓕁𓕂𓕃𓕄𓕅𓕆𓕇𓕈𓕉𓕊𓕋𓕌𓕍𓕎𓕏𓕐𓕑𓕒𓕓𓕔𓕕𓕖𓕗𓕘𓕙𓕚𓕛𓕜𓕝𓕞𓕟𓕠𓕡𓕢𓕣𓕤𓕥𓕦𓕧𓕨𓕩𓕪𓕫𓕬𓕭𓕮𓕯𓕰𓕱𓕲𓕳𓕴𓕵𓕶𓕷𓕸𓕹𓕺𓕻𓕼𓕽𓕾𓕿𓖀𓖁𓖂𓖃𓖄𓖅𓖆𓖇𓖈𓖉𓖊𓖋𓖌𓖍𓖎𓖏𓖐𓖑𓖒𓖓𓖔𓖕𓖖𓖗𓖘𓖙𓖚𓖛𓖜𓖝𓖞𓖟𓖠𓖡𓖢𓖣𓖤𓖥𓖦𓖧𓖨𓖩𓖪𓖫𓖬𓖭𓖮𓖯𓖰𓖱𓖲𓖳𓖴𓖵𓖶𓖷𓖸𓖹𓖺𓖻𓖼𓖽𓖾𓖿𓗀𓗁𓗂𓗃𓗄𓗅𓗆𓗇𓗈𓗉𓗊𓗋𓗌𓗍𓗎𓗏𓗐𓗑𓗒𓗓𓗔𓗕𓗖𓗗𓗘𓗙𓗚𓗛𓗜𓗝𓗞𓗟𓗠𓗡𓗢𓗣𓗤𓗥𓗦𓗧𓗨𓗩𓗪𓗫𓗬𓗭𓗮𓗯𓗰𓗱𓗲𓗳𓗴𓗵𓗶𓗷𓗸𓗹𓗺𓗻𓗼𓗽𓗾𓗿𓘀𓘁𓘂𓘃𓘄𓘅𓘆𓘇𓘈𓘉𓘊𓘋𓘌𓘍𓘎𓘏𓘐𓘑𓘒𓘓𓘔𓘕𓘖𓘗𓘘𓘙𓘚𓘛𓘜𓘝𓘞𓘟𓘠𓘡𓘢𓘣𓘤𓘥𓘦𓘧𓘨𓘩𓘪𓘫𓘬𓘭𓘮𓘯𓘰𓘱𓘲𓘳𓘴𓘵𓘶𓘷𓘸𓘹𓘺𓘻𓘼𓘽𓘾𓘿𓙀𓙁𓙂𓙃𓙄𓙅𓙆𓙇𓙈𓙉𓙊𓙋𓙌𓙍𓙎𓙏𓙐𓙑𓙒𓙓𓙔𓙕𓙖𓙗𓙘𓙙𓙚𓙛𓙜𓙝𓙞𓙟𓙠𓙡𓙢𓙣𓙤𓙥𓙦𓙧𓙨𓙩𓙪𓙫𓙬𓙭𓙮𓙯𓙰𓙱𓙲𓙳𓙴𓙵𓙶𓙷𓙸𓙹𓙺𓙻𓙼𓙽𓙾𓙿𓚀𓚁𓚂𓚃𓚄𓚅𓚆𓚇𓚈𓚉𓚊𓚋𓚌𓚍𓚎𓚏𓚐𓚑𓚒𓚓𓚔𓚕𓚖𓚗𓚘𓚙𓚚𓚛𓚜𓚝𓚞𓚟𓚠𓚡𓚢𓚣𓚤𓚥𓚦𓚧𓚨𓚩𓚪𓚫𓚬𓚭𓚮𓚯𓚰𓚱𓚲𓚳𓚴𓚵𓚶𓚷𓚸𓚹𓚺𓚻𓚼𓚽𓚾𓚿𓛀𓛁𓛂𓛃𓛄𓛅𓛆𓛇𓛈𓛉𓛊𓛋𓛌𓛍𓛎𓛏𓛐𓛑𓛒𓛓𓛔𓛕𓛖𓛗𓛘𓛙𓛚𓛛𓛜𓛝𓛞𓛟𓛠𓛡𓛢𓛣𓛤𓛥𓛦𓛧𓛨𓛩𓛪𓛫𓛬𓛭𓛮𓛯𓛰𓛱𓛲𓛳𓛴𓛵𓛶𓛷𓛸𓛹𓛺𓛻𓛼𓛽𓛾𓛿𓜀𓜁𓜂𓜃𓜄𓜅𓜆𓜇𓜈𓜉𓜊𓜋𓜌𓜍𓜎𓜏𓜐𓜑𓜒𓜓𓜔𓜕𓜖𓜗𓜘𓜙𓜚𓜛𓜜𓜝𓜞𓜟𓜠𓜡𓜢𓜣𓜤𓜥𓜦𓜧𓜨𓜩𓜪𓜫𓜬𓜭𓜮𓜯𓜰𓜱𓜲𓜳𓜴𓜵𓜶𓜷𓜸𓜹𓜺𓜻𓜼𓜽𓜾𓜿𓝀𓝁𓝂𓝃𓝄𓝅𓝆𓝇𓝈𓝉𓝊𓝋𓝌𓝍𓝎𓝏𓝐𓝑𓝒𓝓𓝔𓝕𓝖𓝗𓝘𓝙𓝚𓝛𓝜𓝝𓝞𓝟𓝠𓝡𓝢𓝣𓝤𓝥𓝦𓝧𓝨𓝩𓝪𓝫𓝬𓝭𓝮𓝯𓝰𓝱𓝲𓝳𓝴𓝵𓝶𓝷𓝸𓝹𓝺𓝻𓝼𓝽𓝾𓝿𓞀𓞁𓞂𓞃𓞄𓞅𓞆𓞇𓞈𓞉𓞊𓞋𓞌𓞍𓞎𓞏𓞐𓞑𓞒𓞓𓞔𓞕𓞖𓞗𓞘𓞙𓞚𓞛𓞜𓞝𓞞𓞟𓞠𓞡𓞢𓞣𓞤𓞥𓞦𓞧𓞨𓞩𓞪𓞫𓞬𓞭𓞮𓞯𓞰𓞱𓞲𓞳𓞴𓞵𓞶𓞷𓞸𓞹𓞺𓞻𓞼𓞽𓞾𓞿𓟀𓟁𓟂𓟃𓟄𓟅𓟆𓟇𓟈𓟉𓟊𓟋𓟌𓟍𓟎𓟏𓟐𓟑𓟒𓟓𓟔𓟕𓟖𓟗𓟘𓟙𓟚𓟛𓟜𓟝𓟞𓟟𓟠𓟡𓟢𓟣𓟤𓟥𓟦𓟧𓟨𓟩𓟪𓟫𓟬𓟭𓟮𓟯𓟰𓟱𓟲𓟳𓟴𓟵𓟶𓟷𓟸𓟹𓟺𓟻𓟼𓟽𓟾𓟿𓠀𓠁𓠂𓠃𓠄𓠅𓠆𓠇𓠈𓠉𓠊𓠋𓠌𓠍𓠎𓠏𓠐𓠑𓠒𓠓𓠔𓠕𓠖𓠗𓠘𓠙𓠚𓠛𓠜𓠝𓠞𓠟𓠠𓠡𓠢𓠣𓠤𓠥𓠦𓠧𓠨𓠩𓠪𓠫𓠬𓠭𓠮𓠯𓠰𓠱𓠲𓠳𓠴𓠵𓠶𓠷𓠸𓠹𓠺𓠻𓠼𓠽𓠾𓠿𓡀𓡁𓡂𓡃𓡄𓡅𓡆𓡇𓡈𓡉𓡊𓡋𓡌𓡍𓡎𓡏𓡐𓡑𓡒𓡓𓡔𓡕𓡖𓡗𓡘𓡙𓡚𓡛𓡜𓡝𓡞𓡟𓡠𓡡𓡢𓡣𓡤𓡥𓡦𓡧𓡨𓡩𓡪𓡫𓡬𓡭𓡮𓡯𓡰𓡱𓡲𓡳𓡴𓡵𓡶𓡷𓡸𓡹𓡺𓡻𓡼𓡽𓡾𓡿𓢀𓢁𓢂𓢃𓢄𓢅𓢆𓢇𓢈𓢉𓢊𓢋𓢌𓢍𓢎𓢏𓢐𓢑𓢒𓢓𓢔𓢕𓢖𓢗𓢘𓢙𓢚𓢛𓢜𓢝𓢞𓢟𓢠𓢡𓢢𓢣𓢤𓢥𓢦𓢧𓢨𓢩𓢪𓢫𓢬𓢭𓢮𓢯𓢰𓢱𓢲𓢳𓢴𓢵𓢶𓢷𓢸𓢹𓢺𓢻𓢼𓢽𓢾𓢿𓣀𓣁𓣂𓣃𓣄𓣅𓣆𓣇𓣈𓣉𓣊𓣋𓣌𓣍𓣎𓣏𓣐𓣑𓣒𓣓𓣔𓣕𓣖𓣗𓣘𓣙𓣚𓣛𓣜𓣝𓣞𓣟𓣠𓣡𓣢𓣣𓣤𓣥𓣦𓣧𓣨𓣩𓣪𓣫𓣬𓣭𓣮𓣯𓣰𓣱𓣲𓣳𓣴𓣵𓣶𓣷𓣸𓣹𓣺𓣻𓣼𓣽𓣾𓣿𓤀𓤁𓤂𓤃𓤄𓤅𓤆𓤇𓤈𓤉𓤊𓤋𓤌𓤍𓤎𓤏𓤐𓤑𓤒𓤓𓤔𓤕𓤖𓤗𓤘𓤙𓤚𓤛𓤜𓤝𓤞𓤟𓤠𓤡𓤢𓤣𓤤𓤥𓤦𓤧𓤨𓤩𓤪𓤫𓤬𓤭𓤮𓤯𓤰𓤱𓤲𓤳𓤴𓤵𓤶𓤷𓤸𓤹𓤺𓤻𓤼𓤽𓤾𓤿𓥀𓥁𓥂𓥃𓥄𓥅𓥆𓥇𓥈𓥉𓥊𓥋𓥌𓥍𓥎𓥏𓥐𓥑𓥒𓥓𓥔𓥕𓥖𓥗𓥘𓥙𓥚𓥛𓥜𓥝𓥞𓥟𓥠𓥡𓥢𓥣𓥤𓥥𓥦𓥧𓥨𓥩𓥪𓥫𓥬𓥭𓥮𓥯𓥰𓥱𓥲𓥳𓥴𓥵𓥶𓥷𓥸𓥹𓥺𓥻𓥼𓥽𓥾𓥿𓦀𓦁𓦂𓦃𓦄𓦅𓦆𓦇𓦈𓦉𓦊𓦋𓦌𓦍𓦎𓦏𓦐𓦑𓦒𓦓𓦔𓦕𓦖𓦗𓦘𓦙𓦚𓦛𓦜𓦝𓦞𓦟𓦠𓦡𓦢𓦣𓦤𓦥𓦦𓦧𓦨𓦩𓦪𓦫𓦬𓦭𓦮𓦯𓦰𓦱𓦲𓦳𓦴𓦵𓦶𓦷𓦸𓦹𓦺𓦻𓦼𓦽𓦾𓦿𓧀𓧁𓧂𓧃𓧄𓧅𓧆𓧇𓧈𓧉𓧊𓧋𓧌𓧍𓧎𓧏𓧐𓧑𓧒𓧓𓧔𓧕𓧖𓧗𓧘𓧙𓧚𓧛𓧜𓧝𓧞𓧟𓧠𓧡𓧢𓧣𓧤𓧥𓧦𓧧𓧨𓧩𓧪𓧫𓧬𓧭𓧮𓧯𓧰𓧱𓧲𓧳𓧴𓧵𓧶𓧷𓧸𓧹𓧺𓧻𓧼𓧽𓧾𓧿𓨀𓨁𓨂𓨃𓨄𓨅𓨆𓨇𓨈𓨉𓨊𓨋𓨌𓨍𓨎𓨏𓨐𓨑𓨒𓨓𓨔𓨕𓨖𓨗𓨘𓨙𓨚𓨛𓨜𓨝𓨞𓨟𓨠𓨡𓨢𓨣𓨤𓨥𓨦𓨧𓨨𓨩𓨪𓨫𓨬𓨭𓨮𓨯𓨰𓨱𓨲𓨳𓨴𓨵𓨶𓨷𓨸𓨹𓨺𓨻𓨼𓨽𓨾𓨿𓩀𓩁𓩂𓩃𓩄𓩅𓩆𓩇𓩈𓩉𓩊𓩋𓩌𓩍𓩎𓩏𓩐𓩑𓩒𓩓𓩔𓩕𓩖𓩗𓩘𓩙𓩚𓩛𓩜𓩝𓩞𓩟𓩠𓩡𓩢𓩣𓩤𓩥𓩦𓩧𓩨𓩩𓩪𓩫𓩬𓩭𓩮𓩯𓩰𓩱𓩲𓩳𓩴𓩵𓩶𓩷𓩸𓩹𓩺𓩻𓩼𓩽𓩾𓩿𓪀𓪁𓪂𓪃𓪄𓪅𓪆𓪇𓪈𓪉𓪊𓪋𓪌𓪍𓪎𓪏𓪐𓪑𓪒𓪓𓪔𓪕𓪖𓪗𓪘𓪙𓪚𓪛𓪜𓪝𓪞𓪟𓪠𓪡𓪢𓪣𓪤𓪥𓪦𓪧𓪨𓪩𓪪𓪫𓪬𓪭𓪮𓪯𓪰𓪱𓪲𓪳𓪴𓪵𓪶𓪷𓪸𓪹𓪺𓪻𓪼𓪽𓪾𓪿𓫀𓫁𓫂𓫃𓫄𓫅𓫆𓫇𓫈𓫉𓫊𓫋𓫌𓫍𓫎𓫏𓫐𓫑𓫒𓫓𓫔𓫕𓫖𓫗𓫘𓫙𓫚𓫛𓫜𓫝𓫞𓫟𓫠𓫡𓫢𓫣𓫤𓫥𓫦𓫧𓫨𓫩𓫪𓫫𓫬𓫭𓫮𓫯𓫰𓫱𓫲𓫳𓫴𓫵𓫶𓫷𓫸𓫹𓫺𓫻𓫼𓫽𓫾𓫿𓬀𓬁𓬂𓬃𓬄𓬅𓬆𓬇𓬈𓬉𓬊𓬋𓬌𓬍𓬎𓬏𓬐𓬑𓬒𓬓𓬔𓬕𓬖𓬗𓬘𓬙𓬚𓬛𓬜𓬝𓬞𓬟𓬠𓬡𓬢𓬣𓬤𓬥𓬦𓬧𓬨𓬩𓬪𓬫𓬬𓬭𓬮𓬯𓬰𓬱𓬲𓬳𓬴𓬵𓬶𓬷𓬸𓬹𓬺𓬻𓬼𓬽𓬾𓬿𓭀𓭁𓭂𓭃𓭄𓭅𓭆𓭇𓭈𓭉𓭊𓭋𓭌𓭍𓭎𓭏𓭐𓭑𓭒𓭓𓭔𓭕𓭖𓭗𓭘𓭙𓭚𓭛𓭜𓭝𓭞𓭟𓭠𓭡𓭢𓭣𓭤𓭥𓭦𓭧𓭨𓭩𓭪𓭫𓭬𓭭𓭮𓭯𓭰𓭱𓭲𓭳𓭴𓭵𓭶𓭷𓭸𓭹𓭺𓭻𓭼𓭽𓭾𓭿𓮀𓮁𓮂𓮃𓮄𓮅𓮆𓮇𓮈𓮉𓮊𓮋𓮌𓮍𓮎𓮏𓮐𓮑𓮒𓮓𓮔𓮕𓮖𓮗𓮘𓮙𓮚𓮛𓮜𓮝𓮞𓮟𓮠𓮡𓮢𓮣𓮤𓮥𓮦𓮧𓮨𓮩𓮪𓮫𓮬𓮭𓮮𓮯𓮰𓮱𓮲𓮳𓮴𓮵𓮶𓮷𓮸𓮹𓮺𓮻𓮼𓮽𓮾𓮿𓯀𓯁𓯂𓯃𓯄𓯅𓯆𓯇𓯈𓯉𓯊𓯋𓯌𓯍𓯎𓯏𓯐𓯑𓯒𓯓𓯔𓯕𓯖𓯗𓯘𓯙𓯚𓯛𓯜𓯝𓯞𓯟𓯠𓯡𓯢𓯣𓯤𓯥𓯦𓯧𓯨𓯩𓯪𓯫𓯬𓯭𓯮𓯯𓯰𓯱𓯲𓯳𓯴𓯵𓯶𓯷𓯸𓯹𓯺𓯻𓯼𓯽𓯾𓯿𓰀𓰁𓰂𓰃𓰄𓰅𓰆𓰇𓰈𓰉𓰊𓰋𓰌𓰍𓰎𓰏𓰐𓰑𓰒𓰓𓰔𓰕𓰖𓰗𓰘𓰙𓰚𓰛𓰜𓰝𓰞𓰟𓰠𓰡𓰢𓰣𓰤𓰥𓰦𓰧𓰨𓰩𓰪𓰫𓰬𓰭𓰮𓰯𓰰𓰱𓰲𓰳𓰴𓰵𓰶𓰷𓰸𓰹𓰺𓰻𓰼𓰽𓰾𓰿𓱀𓱁𓱂𓱃𓱄𓱅𓱆𓱇𓱈𓱉𓱊𓱋𓱌𓱍𓱎𓱏𓱐𓱑𓱒𓱓𓱔𓱕𓱖𓱗𓱘𓱙𓱚𓱛𓱜𓱝𓱞𓱟𓱠𓱡𓱢𓱣𓱤𓱥𓱦𓱧𓱨𓱩𓱪𓱫𓱬𓱭𓱮𓱯𓱰𓱱𓱲𓱳𓱴𓱵𓱶𓱷𓱸𓱹𓱺𓱻𓱼𓱽𓱾𓱿𓲀𓲁𓲂𓲃𓲄𓲅𓲆𓲇𓲈𓲉𓲊𓲋𓲌𓲍𓲎𓲏𓲐𓲑𓲒𓲓𓲔𓲕𓲖𓲗𓲘𓲙𓲚𓲛𓲜𓲝𓲞𓲟𓲠𓲡𓲢𓲣𓲤𓲥𓲦𓲧𓲨𓲩𓲪𓲫𓲬𓲭𓲮𓲯𓲰𓲱𓲲𓲳𓲴𓲵𓲶𓲷𓲸𓲹𓲺𓲻𓲼𓲽𓲾𓲿𓳀𓳁𓳂𓳃𓳄𓳅𓳆𓳇𓳈𓳉𓳊𓳋𓳌𓳍𓳎𓳏𓳐𓳑𓳒𓳓𓳔𓳕𓳖𓳗𓳘𓳙𓳚𓳛𓳜𓳝𓳞𓳟𓳠𓳡𓳢𓳣𓳤𓳥𓳦𓳧𓳨𓳩𓳪𓳫𓳬𓳭𓳮𓳯𓳰𓳱𓳲𓳳𓳴𓳵𓳶𓳷𓳸𓳹𓳺𓳻𓳼𓳽𓳾𓳿𓴀𓴁𓴂𓴃𓴄𓴅𓴆𓴇𓴈𓴉𓴊𓴋𓴌𓴍𓴎𓴏𓴐𓴑𓴒𓴓𓴔𓴕𓴖𓴗𓴘𓴙𓴚𓴛𓴜𓴝𓴞𓴟𓴠𓴡𓴢𓴣𓴤𓴥𓴦𓴧𓴨𓴩𓴪𓴫𓴬𓴭𓴮𓴯𓴰𓴱𓴲𓴳𓴴𓴵𓴶𓴷𓴸𓴹𓴺𓴻𓴼𓴽𓴾𓴿𓵀𓵁𓵂𓵃𓵄𓵅𓵆𓵇𓵈𓵉𓵊𓵋𓵌𓵍𓵎𓵏𓵐𓵑𓵒𓵓𓵔𓵕𓵖𓵗𓵘𓵙𓵚𓵛𓵜𓵝𓵞𓵟𓵠𓵡𓵢𓵣𓵤𓵥𓵦𓵧𓵨𓵩𓵪𓵫𓵬𓵭𓵮𓵯𓵰𓵱𓵲𓵳𓵴𓵵𓵶𓵷𓵸𓵹𓵺𓵻𓵼𓵽𓵾𓵿𓶀𓶁𓶂𓶃𓶄𓶅𓶆𓶇𓶈𓶉𓶊𓶋𓶌

14. P. Ch. B IV, rto 10, 7:

[illegible]

tr. Gardiner, op.cit., p.34: 'Goats and cattle turn to thee. Flying things spring aloft unto thee' (same hymn as previous example).

15. P. Ch. B IV, rto 12, 5:

tr. Gardiner, op.cit., p.35: 'goats, cattle, and birds cry [unto him]'. (hymn as before).

16. Abyd Mar II, 54, 5:

ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥

tr. Korostovtsev: 'parmi les dieux comme (parmi) les hommes, les quadrupèdes, les oiseaux et ceux qui habitent les eaux également'.¹²

17. P. Berl 3038, 8, 2 (hymn to Ptah):

$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

'mankind, gods and all hwt'.¹³

18. BM 797 (Shabaka Stone):

୨୨୨ ୩ ୪ ୫ ୬ ୭ ୮ ୯ ୧୦ ୧୧ ୧୨ ୧୩ ୧୪ ୧୫ ୧୬ ୧୭ ୧୮ ୧୯ ୨୦ ୨୧ ୨୨ ୨୩ ୨୪ ୨୫ ୨୬ ୨୭ ୨୮ ୨୯ ୩୦ ୩୧ ୩୨ ୩୩ ୩୪ ୩୫ ୩୬ ୩୭ ୩୮ ୩୯ ୪୦ ୪୧ ୪୨ ୪୩ ୪୪ ୪୫ ୪୬ ୪୭ ୪୮ ୪୯ ୫୦ ୫୧ ୫୨ ୫୩ ୫୪ ୫୫ ୫୬ ୫୭ ୫୮ ୫୯ ୬୦ ୬୧ ୬୨ ୬୩ ୬୪ ୬୫ ୬୬ ୬୭ ୬୮ ୬୯ ୭୦ ୭୧ ୭୨ ୭୩ ୭୪ ୭୫ ୭୬ ୭୭ ୭୮ ୭୯ ୮୦ ୮୧ ୮୨ ୮୩ ୮୪ ୮୫ ୮୬ ୮୭ ୮୮ ୮୯ ୯୦ ୯୧ ୯୨ ୯୩ ୯୪ ୯୫ ୯୬ ୯୭ ୯୮ ୯୯ ୧୦୦

tr. Erman,¹⁴ p.937: 'alle Götter, alle Menschen, alle Tiere und alle Würmer, die da leben, indem er denkt(?) und indem er alles befiehlt, was er will'.

19. Amonshymn Kairo 1, 1-2, 1 (P. Boul XVII=O.DelM 1224):¹⁵

[illegible]

In order to understand properly the various terms found in these texts it is essential to study them in other contexts. Most are very common. (A few more terms with apparently similar significance are found in Ptolemaic texts but will not be discussed here for reasons given in the Introduction).

The term ʿwt (Wb I, 170,7 - 171,1: vierfüßige Tiere... Kleinvieh...Wild...Ein bestimmtes Tier), written ḥ3wt¹⁶ (Wb I,29,15-16: Vieh...Wild) after the Amarna period, is attested with a great variety of determinatives. These may show both domesticated livestock - goats, sheep, donkeys, cattle, or a combination of these¹⁷ - and, especially in the phrase 'ʿwt of the desert' (ʿwt (n) ḥ3st), wild animals - gazelle, oryx and ibex.¹⁸ If only a single determinative appears this

tends to be the goat ¹⁹ or gazelle according to context, though ʕwt only ever shows the 'cow's skin' as a determinative²⁰. Two seldom-attested sub-groups of ʕwt (ʕwt nḏst and ʕwt ḥḏt) show goat and sheep determinatives (if any) respectively.²¹ The phrase tp-n-ʕwt/ʕwt (Wb V, 267, 4: das beste an Tieren) is used of goats (but also contrasted with them)²² and with a cattle determinative²³ as well as in the phrase tp-n-ʕwt-ḥst²⁴ and elsewhere,²⁵ and would seem, therefore, to be little different in meaning from ʕwt/ʕwt alone. The phrase is the precursor of Coptic ΤΒΝΗ,²⁶ applied to the ox, ass, camel, sheep and goat as distinct from wild animals, ΘΗΠΙΟΝ.²⁷

ʕwt (nbt/ʕbn) may be used as a broad category followed by the names of specific animals²⁸ or may be used (eg in the phrase ʕwt ʕbn) to summarize a list of animals.²⁹ ʕwt are described as 'going on all fours';³⁰ ʕwt is applied to mammals other than livestock,³¹ and even to birds.³² ʕwt are mentioned in the fields³³ - where they could be a nuisance³⁴ - and kept in byres (ʕhy)³⁵. They were tended by ʕmy-r ʕwt³⁶, fed and watered,³⁷ branded³⁸ and brought in from the fields³⁹. They appear to have been a prized possession.⁴⁰ The ʕwt is contrasted with various types of animals, notably cattle⁴¹ and goats,⁴² and is mentioned once in parallel with a lion, and once with a goose.⁴³

ʕwt is contrasted with mankind⁴⁴ or with the gods themselves.⁴⁵ Man is sometimes referred to as the 'ʕwt of god' (ʕwt nṯr) or the 'noble ʕwt' (ʕwt ʕpst)⁴⁶; ʕwt nṯr is also used of sacred animals.⁴⁷ (Mnmnt too appear among 'the god's possessions').⁴⁸ ʕwt are also mentioned in connection with Seth⁴⁹ and Rē.⁵⁰

The mnmnt (Wb II, 81, 17-23 : die Herde, das Herdenvieh) which occurs with ʕwt in the classificatory lists usually has a cattle determinative and may be contrasted with ʕwt in other contexts as well.⁵¹ It occasionally shows a similar variety of determinatives to ʕwt,⁵² and mnmnt may be used to mean 'herd' in much the same way as ʕdr⁵³ (Wb I, 154, 12-14: Herde (von Vieh u. Geflügel)); herds (ʕdrw,⁵⁴ mnmnt,⁵⁵ tst,⁵⁶ hnmw⁵⁷ and ḥrt⁵⁸) of ʕwt are also attested. ʕwt also occurs paired with other terms from the classificatory lists (ʕpd, rmw, mhyt)⁵⁹ and may be contrasted with plant foodstuffs.⁶⁰

The word ʕwt itself may be derived from the term for the (shepherd's) crook,⁶¹ which appears in early writings of the word.

It may be deduced from the above, therefore, that wt/i3wt, when contrasted with 'the gods' or 'mankind', has the force of 'animal' in its broadest sense. The translation 'animal' is further supported by a single text in which birds are clearly covered by the term wt. This meaning has been proposed for tp-n-i3wt by Nims⁶² and it has been shown above that this phrase was largely synonymous with wt/i3wt alone. In other contexts wt/i3wt names a group of animals parallel to fish, birds and reptiles, and as such seems to designate the class of mammals. wt/i3wt is sometimes contrasted with cattle, and may then represent mammals (especially livestock) excluding cattle (mnmnt)⁶³; these classes are also separated in certain Old Testament texts.⁶⁴ When contrasted with goats, pigs etc., the meaning of wt may be 'mammal (excluding those named)'.

Of all animals wt/i3wt seems to have been most closely associated with the goat (less often the sheep), and it may be that this is to be understood when wt/i3wt appears to refer to a single animal (as in the medical texts).⁶⁵ The broad meaning of wt could also be restricted as required by the choice of determinatives.

(tp-n-)wt/i3wt may, therefore, be said to occupy the 'unique beginner' and mammal 'life-form' categories in ancient Egyptian, and is probably best translated 'beast', or, where appropriate, as Gardiner has suggested, 'any (other) kind of animal'.⁶⁶

A word with apparently similar meaning is m3 (not in Wb), to be separated from m3i 'lion', as some texts quote both together.⁶⁷ Like wt it is contrasted with mankind,⁶⁸ and other groups of animals.⁶⁹ (The meaning of the word is made explicit in an Old Kingdom and a Middle Kingdom text;⁷⁰ in the former it describes a number of desert creatures, in the latter a group of horned animals.) This is also true of mnmnt, already mentioned above,⁷¹ though the term is most often attested alone.⁷²

Mnmn appears as a verb of motion (Wb II, 80, last entry - 81, 15) which may lie behind the meaning of mnmnt used as a collective noun, especially of cattle; Paton, therefore, suggested a literal translation of mnmnt as 'droves'.⁷³ Mnmnt is never applied to wild animals, only domesticates, and mnmnt are mentioned several times 'in the fields' (3ht).⁷⁴ Its determinative indicates that its most important application was to cattle though it could be contrasted with these.⁷⁵ In one text mnmnt appears as a variant of wnmt 'provisions'

which may be indicative of the significance of cattle as a source of food.⁷⁶ Mnmnt were prized as booty⁷⁷ and were kept in temples to provide sacrifices.⁷⁸ Mnmnt were looked after by herdsmen (m-r);⁷⁹ the king was called 'leader' (tsw) of the mnmnt as a metaphor for his care of his people.⁸⁰

In the classificatory lists given above, birds are often denoted by the phrase p3yt nbt hnnt nbt, 'all those which fly and alight'⁸¹ (see Wb I, 494,1-12: fliegen, auffliegen, fortfliegen; Wb III, 287,3-288,3: niederschweben). This description also occurs in other texts.⁸² p3yt (Wb I,494,13-14: 'das was fliegt' als Bez. der Vögel) appears alone in two other instances, in an offering list and in one of the medical texts.⁸³ The similar form p3yw (Wb I, 494,15-17: 'die Fliegenden' als Bez. der Vögel) is generally confined to Ptolemaic texts, though it does appear in a Dynasty 20 classificatory list (see above). Hnnt (Wb III, 288,4-6: das Geflügel) also occurs independently.⁸⁴

Coptic did not retain these words, using instead ⲉⲗⲙⲧ, also derived from a word meaning 'to fly'.⁸⁵ This term appears to cover flying insects as well as birds - in one text a grasshopper is described as a 'ⲉⲗⲙⲧ which can jump'.⁸⁶ It is likely that flying insects were comprised within the earlier phrase p3yt hnnt, given that the names of several such insects are given a bird determinative. It may also be that bats were included in the bird class - a representation at Beni Hasan shows two bats together with a number of birds, and another writing of the name of one of the bats depicted has a bird determinative (see Ch.3: Bats).

Another, fairly rare, term apparently applied to all birds also alludes to their powers of flight - ⲓryw-pt (Wb I, 104, 4: die Vögel), lit. 'those on the sky'.⁸⁷ An otherwise unattested word smḏw occurs as a variant of this.⁸⁸ The word hrḏw, lit. 'those above', has also been taken as a general term for birds.⁸⁹

3pd (Wb I, 9, 5-8: allgemein Vogel), attested from all periods of Egyptian history, appears to have a general meaning 'bird' though it is seldom attested in the classificatory lists. Writings 3pdwt, and later ḏpt, are also known.⁹⁰ Like wt it could show a number of different determining signs,⁹¹ usually a type of duck;⁹² Coptic ⲙⲉⲩ, derived from this word, designates only the goose.⁹³ It often occurs in parallel with other types of animals, commonly 'fish' (rmw),⁹⁴ but also cattle, goats, donkeys, mules(?), pigs, lions(?) and other goods.⁹⁵ Phrases

such as 3pd nb or 3pd šbn (cf (wt) above), sometimes at the end of lists of bird names⁹⁶ likewise indicate the rôle of 3pd as denoting a 'life form'. In one text 'waterbirds' (3pd n mw), comprising cranes, geese and ducks, are separated from other types of birds (eg pigeons) chosen as offerings.⁹⁷ 3pd mr 'channel bird', comprising at least two types of duck, is also known.⁹⁸

Waterbirds were elsewhere given the names hnm (Wb, III, 381, 14: als Bez. für Sümpfvögel)⁹⁹ or kbh (Wb V, 30, 8: die Wasservögel)¹⁰⁰ which again could show a variety of determinatives. The phrase 3pdw nty m kbh¹⁰¹ (cf 3pdw m š3)¹⁰² may designate the same birds, as perhaps does 'p3yw from the kbh.'¹⁰³ 'Foreign birds' (3pdw drdr) are recorded as coming to the Delta to nest, in a passage which describes the overturning of the natural order of things.¹⁰⁴ The blood (snf) of 3pd is mentioned in a magical charm¹⁰⁵ (note that many parts of birds - written without phonetic complements - occur in the medical texts, and are not discussed here).

In the Pyramid Texts 3pdw occurs in parallel with other words which seem to designate individual species of bird - bik, smn and dryt¹⁰⁶ - though in one case bik has multiple determinatives also. In one Text 3pd is given in parallel with hpr, the scarab beetle;¹⁰⁷ and this parallelism is also found in other contexts.¹⁰⁸ Elsewhere in the Pyramid Texts it is specifically a 'green 3pd' (3pd w3d) which appears with the Nile Goose smn,¹⁰⁹ which suggests that 3pd denoted a type of bird. In the New Kingdom stools with legs ending in ducks' heads were described as having legs 'as the faces of 3pdw'.¹¹⁰

Faulkner¹¹¹ has suggested, therefore, that 3pdw originally meant 'duck', perhaps including other species of small waterfowl; the term was then later extended to embrace all birds 'possibly because in the undrained marshes of early Egypt ducks probably greatly outnumbered the other species of birds'. The latter was very probably true - the abundance of birds and fish in the papyrus marshes was doubtless the reason for the overtones of everlasting potency and rebirth in the 'fishing and fowling' tomb scenes.¹¹² It may be that, as with the goat and (wt), some species of bird (especially ducks) were considered typical of 3pd, though the word usually had general significance. This would explain the appearance of various parts of (3pd) in the medical texts - either the type of bird to be used was not important, or 3pd already suggested some particular bird. Something similar would probably have been suggested by the phrase (n 3pdyw¹¹³ , precursor of

After the Pyramid Texts 3pdw seldom appear other than as offerings¹¹⁵ though some literary references occur.¹¹⁶ Birds were held or tied at the wings (dnh, lit. 'winged') to prevent them from flying and this was used as a metaphor of helplessness.¹¹⁷ The feather (šwt) of a bird was also used in this way to denote something easily overcome.¹¹⁸ 3pd is also attested as a verb, meaning apparently 'flutter (like a bird)', or similar (Wb I, 9,12-14: herbeieilen).¹¹⁹ The young of 3pdw were called smsw¹²⁰; it was said in one text that in times of disorder birds would no longer lay eggs in their nests.¹²¹ In another text birds are recorded in trees (m ht).¹²² In another a spell is to be recited over 'seven birds'.¹²³

The word which appears to designate 'fish' in the classificatory lists, rm (Wb II, 416,12-17: der Fisch), has already been mentioned in connection with 3pd. Like 3pd, and šwt and mmnt, the word could show several determinatives;¹²⁴ this, together with the use of the word almost exclusively in the plural, 'beweisen die allgemeinere Bedeutung "Fische als Gesamtheit" ohne Spezifizierung der Art'.¹²⁵

Although most commonly paired with 3pd, rmw occurs in parallel with the names of other animal classes¹²⁶ and other (specific) types of fish.¹²⁷ Rmw šbn at the end of lists of fish, giving the totals of the numbers of fish mentioned, indicates that rmw was a broad term embracing various individual species.¹²⁸

Unsurprisingly, there are many references to fish in the water,¹²⁹ in the river,¹³⁰ or a lake,¹³¹ or in the sea;¹³² defeated enemies were compared to fish stranded on land.¹³³ Fish in this condition were eaten by jackals; in the normal course of events they were the prey of crocodiles.¹³⁴ There are numerous mentions of the catching¹³⁵ and eating¹³⁶ of fish - even by Rē' - ¹³⁷ though the eating of fish could be taboo.¹³⁸ One text records the feeding of fish to the sacred crocodile of Sobek.¹³⁹ Rmw are attested frequently in the ostraca¹⁴⁰ (or similar records)¹⁴¹ though writings often show only the determinative and plural strokes.¹⁴² Various parts of fish - scales,¹⁴³ fins¹⁴⁴ (lit. 'hands'), fat¹⁴⁵ and bones¹⁴⁶ - are noted; whole or 'split' fish, dried or fresh,¹⁴⁷ are attested as are 'fat' fish and wdh fish.¹⁴⁸ The eggs of fish had a proverbially bad odour.¹⁴⁹ Fish also seem to have been associated with the stars; one text says that stars began their existence as fish, formed from the gods' tears.¹⁵⁰

Other animals than fish may have been included in the category rmw. The crocodile god Sobek is designated 'the great fish' (rmw wr)¹⁵¹ and the words for turtle (štw) and tadpole (hfn) occasionally have fish determinatives.¹⁵² The mention of rmw as dangerous animals¹⁵³ also indicates that the term might include other creatures.

Various less common terms designating fish, and perhaps other creatures as well, can be isolated. Mhyt (Wb II, 127, 10-12: Kollektivum: die Fische), lit. 'swimmer', can show multiple determinatives,¹⁵⁴ and in one case appears to be a general term comprising at least one other species.¹⁵⁵ Like rmw, mhyt are recorded as being caught¹⁵⁶ and eaten.¹⁵⁷ The phrase 'nb mhyt' (cf nb rmw) appears on an ostrakon.¹⁵⁸ Imyw-mw (Wb II, 50, 16: die Wassertiere),¹⁵⁹ lit. 'those in the water', Imyw-b^ch (not in Wb),¹⁶⁰ lit. 'those in the inundation', tb (Wb V, 261, 5: Fische), with variant writings dpv,¹⁶¹ lit. 'floater',¹⁶² tpy (Wb V, 296, 7: Art Fische),¹⁶³ and tpywt,¹⁶⁴ nšmyt (Wb II, 340, 7: die Fische),¹⁶⁵ lit. 'scaly ones' and sšnw (Wb IV, 294, 5-6: die Fische),¹⁶⁶ are also attested.

Of these, mhyt, Imyw-mw, Imyw-b^ch and tpt reflect the watery habitat of this class of animals,¹⁶⁷ while nšmyt and sšnw describe the appearance of fish. Tpt and variants may be the precursors of Coptic ὕδῆ 'fish'. Mhyt and Imyw-mw are demonstrably parallel to other class names and should therefore be considered as life-form labels.¹⁶⁸ Three further terms for fish are confined to Ptolemaic texts. These are hnn (Berlin Zettel), hww (Wb III, 247, 9: die Fische) and gr (Wb V, 180, 12: Fische). The first two are in classificatory lists of the type mentioned above and would, therefore, seem to designate the class 'fish'.¹⁶⁹

The final terms in the classificatory lists are generally ddft (Wb V, 663, 6-634, 2: Wurm, Gewürm...Schlange)¹⁷⁰ and hf3w (Wb III, 72, 14-20: Schlange), fem. hf3t (Wb III, 73, 1-5). They are the least frequently mentioned class in the lists, and ddft are elsewhere recorded with insects as the least significant of creatures.¹⁷¹

Both terms consistently show snakes as determinatives though ddft also occasionally has the cow's-skin.¹⁷² The king's uraeus is once described as a ddft¹⁷³ as is a boat with snakes at the prow and stern,¹⁷⁴ so the connection of ddft and snakes was obviously close. In one of the Book of the Dead lists given above the terms hf3t and ddft are used together, so there was clearly some difference in their

meaning.¹⁷⁵ This may have been slight, given the description of the uraeus and boat above and the fact that a prescription from P. Ebers against hft in the body ends with the claim to dispel ddft in the body.¹⁷⁶ Both were used as terms for ground-dwelling creatures inhabiting holes;¹⁷⁷ hf3w might also be found in the water, hf3t in the grain and ddft in the valleys of the desert.¹⁷⁸ ddft occurs in magical texts¹⁷⁹ and hf3w on an ostrakon.¹⁸⁰ hf3w was also a toponym.¹⁸¹

The bites of hf3w and ddft were recorded¹⁸² and spells for 'shutting the mouths' of these creatures are known.¹⁸³ Hft were noted in the medical texts as a cause of illness and to be eradicated,¹⁸⁴ and a magical spell records ddft as a cause of illness also.¹⁸⁵ In one diagnosis of illness a patient's flesh is said to be like that of a ddft,¹⁸⁶ in another his breath like the venom of a hf3w.¹⁸⁷ ddft appear in another text in connection with the toes (s3hw), but the context is too broken to allow a proper interpretation.¹⁸⁸ Elsewhere in the medical texts the fat (mrht) of hf3w is used in prescriptions,¹⁸⁹ the skin(?) of a snake rubbed on the head cured pain,¹⁹⁰ and in other texts too hf3w evidently denotes an actual creature.¹⁹¹ Killing a snake (hf3w) in a dream was considered a good omen.¹⁹² Magical texts calling for the protection of the limbs from hf3w and hf3t might refer to both real snakes and to bodily parasites such as may be meant by the hf3t of the medical prescriptions.¹⁹³ Mythological snakes were also called hf3w.¹⁹⁴

In a number of cases, therefore, both hf3w/hf3t and ddft seem to be translatable by 'snake' alone, though some other meaning is probably to be found for the hft as inducers of disease and dtf (for ddft) as consumers of corpses.¹⁹⁵ There is a small degree of evidence to indicate that other creatures were included in this class. A lizard appears as the determinative of hf3 in an Old Kingdom inscription¹⁹⁶ and the designation 𓂏𓂐𓂑 (Wb V, 634, 3: als allgemeine Bez. für Reptilen) is applied to lizards depicted on a Late Period sarcophagus.¹⁹⁷ 'Toes of 𓂏𓂐 1' are mentioned in Ebers.¹⁹⁸ A crocodile deity is called 'foremost snake' (hf3tpy).¹⁹⁹ At Edfu also the scorpion Selket is described as 'the noble ddf',²⁰⁰ and in one New Kingdom text wh^c 'scorpion' has a snake as determinative.²⁰¹ At Esna a frog (written as the name of the deity Heket) also has a snake determinative.²⁰²

Certain other terms appear to designate similar creatures. Two highly descriptive terms, which may apply to snakes generally rather than to specific types, are sdrw 'those which lie' (Wb IV, 392, 10: die

Schlangen)²⁰³ and hriw-ht.sn 'those on their bellies' (Wb III, 135, 3: Schlange, Wurm...).²⁰⁴ Both are uncommon, and a more precise translation cannot be offered.

The word r (Wb II, 393, 7-10: Schlange; rrw: Wb II, 438, 12: Art Schlange, is probably a different word²⁰⁵) appears a number of times in oracular amuletic decrees in parallel with terms for sundry dangerous beasts, notably msh, hf3w, wh't, ddft and hrr²⁰⁶ (Wb III, 150, 2-3: eine Schlange in der Unterwelt...alles Gewürm, cf Wb III, 150, 1: Art Eingeweidewürmer ('im Bauch') als Krankheitserreger). Certain of these texts give writings of r without snake determinative;²⁰⁷ others show no determinative at all.²⁰⁸ In the latter case the word may easily be read 'mouth' (Wb II, 389, 9: der Mund) and this was indeed the translation used by Edwards in his publication of the decrees.²⁰⁹ Meeks also believed this to be the literal meaning of r [snake].²¹⁰ Elsewhere snakes (hf3w) are described as 'biting with their mouths and pricking with their tails (sic!),'²¹¹ and one amuletic decree has the similar phrase 'the mouth of every ddfy',²¹² both reminiscent of the 'every biting r' of other decrees. Nevertheless r are also attested as 'biting with their mouths and pricking with their tails',²¹³ and, like hf3w and ddft, r appear in connection with 'their holes'.²¹⁴ This indicates that the words had similar meanings.

R and ddft appear in parallel in a text concerned with the decay of the corpse;²¹⁵ in another, hf3w nb, hf3t nbt and r appear as variants²¹⁶ in a spell to protect the limbs against these creatures. R attacking a corpse is also mentioned on a Late Period sarcophagus²¹⁷ and in the Book of the Dead.²¹⁸ Spells against the r are also found in papyri from Turin²¹⁹ and in the Metternich Stela.²²⁰

Another word to be considered here is hrr, attested in a small number of texts.²²¹ In the medical texts a prescription against hrr is found among those against hft.²²² The writing hrrt appears when contrasted with other 'life forms'.²²³ In one text the word appears in parallel with ddft.²²⁴ The word usually has a snake as determinative, though one Ptolemaic text adds a scorpion.²²⁵ (See also hrrt in Ch.20: Insects).

Hf3w probably meant originally 'creeping thing' (unless the verb hf3 meant 'to move like a snake' and was derived from the name of the animal).²²⁶ Gardiner suggested that ddft meant literally that 'which says fff'.²²⁷ This seems to be the very opposite of their eventual

meanings in Coptic - 204 'snake' and ⲭⲁⲧϣⲉ 'reptile'.²²⁸ Edwards' renderings of hf3w, ddft and r in the amuletic decrees as 'serpent', 'snake' and 'ophidian', with hrr as 'reptile', seem to represent an attempt to distinguish the terms in his English translations rather than to give real equivalents to the Egyptian words. Of the four terms r is the only one which does not appear in the classification lists naming (apparently) one of the classes of the animal kingdom. In the amuletic decrees ddft, hrr and r are followed by nb whereas hf3w is not, like msh and wh't. This seems to indicate some sort of distinction between hf3w/msh/wh't and ddft/hrr/r - 'the snake', 'the crocodile', 'the scorpion' as opposed to 'all sorts of' (nb) '[other noisome creeping creatures]'. In some of the decrees r seems to have replaced ddft and hrr, which suggests that there was some degree of similarity between the terms. Evidence from later texts suggests that r was a broad term which embraced various poisonous types of snake²²⁹ and the same might, therefore, be concluded of ddft and hrr. Indeed, Meeks has suggested that hrrt was a term for 'small animals', embracing snakes, scorpions and insects.²³⁰

The use of a snake to determine these general terms would indicate that snakes were the most important element of the class and explain the appearance of the specific hf3w/hf3t in the classificatory lists. The snake determinative was considered appropriate for creatures which are evidently not snakes, nor even reptiles, such as the insect larvae which destroy paper or wood, so it is clear that the Egyptians' perception of a class separate from mammals, fish and birds was fairly inclusive. This feature is found in other languages. Brown²³¹ surveyed the 'life form' categories of 112 languages and found 'snake' to be the most inclusive of all, comprising 'featherless, furless, elongated creatures adapted to crawling, usually lacking appendages. (This life form in its greatest extension includes worms, snakes, lizards and, occasionally, other elongated creatures such as reptilelike insects)'.

Ancient Egyptian is unusual in having no separate term for the 'wug' ('worm' + 'bug') class which is identifiable from many other languages, though terms for individual insects are known. The need for such a term may have been avoided by the apparent inclusion of winged insects in a class of flying things and various 'creepy-crawlies' in a group of creeping things.

The groupings of the classification lists are echoed in a title from the Middle Kingdom: 'overseer of horn, hoof, feather and

scale'.²³² This gives a clear insight into the divisions perceived by the Ancient Egyptians within the animal kingdom, which might be expressed as follows:

- (a) things which walk (mammals, not including mankind and sometimes excluding cattle, representative of the whole animal kingdom - compare the vernacular use of English 'animal')
- (b) things which fly (birds; also bats and certain insects)
- (c) things which swim (fish; also crocodiles, turtles, hippos)
- (d) things which crawl (snakes; also scorpions, lizards).²³³

Ancient Egyptian provides useful comparative material to the folk classification of other cultures, though it does not entirely follow the common pattern. It has a unique beginner, wt,²³⁴ and three life form labels, wt, p3yw (more specifically 3pd 'bird'), mhyt (more specifically rmw 'fish') and ddft (more specifically hf3w/hf3t 'snake'). Other terms, some obviously descriptive (such as imyw-mw 'those things in the water'), are also used to name these life-forms. This has not been noted as a feature of modern primitive languages. Ancient Egyptian is also unusual in encoding the 'mammal' group (wt) before the 'wug' group and it would be interesting to know from future studies whether this was characteristic of ancient man.

PART 1 : MAMMALS

Chapter 2 : Antelopes and Similar Animals

The most commonly represented of the non-bovine ruminants were the gazelle, oryx and ibex. They were depicted wild or semi-wild in hunting scenes and captured or domesticated in various offering scenes. All three occur as determinatives of ḥwt ḥst, referring to desert fauna, though the gazelle occurs most frequently in this context (see ḥwt).

Of the ancient terms for these animals only that for the gazelle, ghs and variants¹ (Wb V, 191, 1-9: die Gazelle), survived into Coptic (Ⲅⲓⲟⲥ, Ⲅⲟⲓⲥⲉ, Ⲅⲁⲓⲥⲉ).² The word is usually taken to denote the Dorcas Gazelle (Gazella dorcas L.),³ a small species occurring today in semi-desert plains from Senegal to Morocco and through Northern Africa and Iran to India.⁴ Unlike many other gazelle species it does not show a distinct flank band, and this is true of the gazelles in ancient Egyptian representations where colouring survives.⁵ Both the male and female carry horns.

Another animal which has been considered a gazelle is that named gsj (Wb V, 206, 2: Art Antilope) in the tombs of Ti and Idut,⁶ identified by Keimer as G.isabella Gray (now known as G.dorcas isabella).⁷ This species was also identified by Lortet and Gaillard from mummified remains.⁸ Another writing, gsj, was noted by Keimer from the tomb of Ndtj at Giza.⁹ In the tomb of Ti the gsj is distinguished from the ghs by having its horns shown from the front rather than in profile as the ghs is usually drawn, though unnamed representations should not be divided into species on these grounds alone.¹⁰

M3wd appears in one representation over a man carrying two gazelles and three hedgehogs in a box suspended from a pole over his shoulder. The term refers to the carrying pole, however, and not to these or any other animals as has been suggested.¹¹

A gazelle-like species, the gerenuk (Litocranius walleri Brooke), has also been identified from ancient Egypt, though not from historic times.¹²

The gazelle (ghs) is shown frequently in hunting scenes, sometimes named,¹³ and is often named in depictions or lists of offerings¹⁴ where it is usually accompanied by other antelopes. Like the oryx and ibex and other highly prized animals gazelles were imported from Nubia.¹⁵ As

with many animals its parts are mentioned in medical preparations.¹⁶ Gazelles also appeared in literary texts.¹⁷

The feminine form, ghst, occurs as a toponym¹⁸ and as the name of a type of loaf (cf ih etc; see Ch.4 : Cattle).¹⁹

The species of oryx most likely to have occurred in ancient Egypt are the Scimitar(-horned) or North African Oryx (Oryx dammah²⁰ (Cretschmar)), which was once common across north Africa but is now restricted to a small area in the southern Sahara,²¹ and the White or Arabian Oryx (O.leucoryx Pallas), which once inhabited the Sinai Peninsula, Jordan, Israel, Arabia, Iraq and Syria and is now extinct in the wild.²² These oryxes have recently been considered subspecies of O.gazella(L).²³ It has also been suggested that the Beisa oryx (O.(g.)beisa Rüppell) was known to the ancient Egyptians,²⁴ this subspecies occurs on the Red Sea coast of Ethiopia and previously also inhabited Sudan and Eritraea.²⁵

Although O.leucoryx is most commonly mentioned in Egyptological literature the species recorded by Flower²⁶ from Egypt is O.dammah, though it became extinct there in the mid 19th century. Ancient representations of oryxes differ somewhat, particularly in the curvature of the horns (straight horns appear on O.leucoryx and O.beisa, but sweeping curved horns on O.dammah).²⁷ Colouring (where it is preserved) is usually consistent, showing a white coat with brown markings on the face, flank, thighs, chest and sometimes back of the oryx,²⁸ which accords well with descriptions of O.dammah.²⁹

The Egyptian name for the oryx appears in its fullest form as m3hd (Wb II, 11, 4-9: die weiße Säbelantilope (oryx leucoryx))³⁰ or rn (n) m3hd³¹ but also occurs as m3 (Wb II, 11, 3: Antilope),³² rn m3 (Wb III, 210, 10: als Abkürzung für m3-hd 'die weiße Säbelantilope'),³³ hd³⁴ or rn hd³⁵ and in an abbreviated form, mh (Wb II, 121, 11-12: die Säbelantilope),³⁶ in Ptolemaic texts (for the abbreviation of names in a similar context cf sr, trp; see Ch.15 : Waterbirds). Certain New Kingdom writings showing the cow's skin determinative (Sign List F27)³⁷ after the m3 led Loret to assume for m3 a general meaning: 'bête désertique'; m3hd was thus 'bête blanche du désert',³⁸ (cf m3; see Ch.1: Classification).

As may be seen from some of the examples quoted in the notes above, and elsewhere,³⁹ the oryx appears in various scenes or lists from tombs. It was sometimes shown being fattened (wšš)⁴⁰ and was perhaps tamed.⁴¹ It also occurs as a sacrificial beast⁴² and associated with Seth⁴³ and Horus.⁴⁴

The Coptic term for antelope (as distinct from gazelle)⁴⁵ is the descendant of Egyptian šš3w (Wb IV, 543, 5-6: die Kuhantilope), with the feminine form šš3wt.⁴⁶ From certain excellent named representations⁴⁷ showing the characteristically long face of this antelope it may be identified as a hartebeest (Alcelaphus buselaphus Pallas).⁴⁸ The šw hieroglyph (Gardiner, Sign List, E9: 'newborn bubalis or hartebeest (Alcelaphus buselaphus)') was identified as a young hartebeest by Keimer (he suggested both A. buselaphus and A. major) from representations of the young animals in various tombs and from a detailed hieroglyph from the Hatshepsut obelisk at Karnak.⁴⁹

Another antelope, named dbnw (Wb V, 568, 2: Art Antilope) by the Egyptians, was considered by Vandier⁵⁰ and Meeks⁵¹ to be a hartebeest also, but from the sole complete drawing of this animal (in the tomb of Mereruka),⁵² which lacks the hartebeest's characteristic head (and has longer horns), it is clear that it was not. dbnw was identified by Gaillard⁵³ as another species altogether, the 'addax à nez tacheté' (Addax, Addax nasomaculatus Blainville).⁵⁴ He believed this to be the same species as the antelope called nwdw (Wb II, 226, 15-16: die Mendesantilope (addax nasomaculatus)),⁵⁵ because of the similarity of the two in the scene in the tomb of Mereruka to two nwdw in the tomb of Ti. In Mereruka the dbnw, brown, with horns drawn from the front precedes the nwdw, grey like the ghs and m3hd, with horns drawn from the side. In Ti⁵⁶ a nwdw (horns drawn from the front) precedes a nwdwt (horns in side view). Gaillard believed the terms were chosen according to the animals' colour and that the Egyptians distinguished between addaxes in winter and in summer pelage - the winter coat of the addax is grey-brown while in summer its coat becomes sandy or almost white.⁵⁷ This is indicated in representations at Maidûm⁵⁸ where in one tomb two addaxes are coloured differently (sandy brown and greenish); they are, however, given the same name (nwdw). It should be noted that some animals in the Mereruka scene were misnamed,⁵⁹ and the name dbnw may simply have been placed over the wrong animal - it is unfortunate that the only other known representation of a dbnw is largely lost and cannot provide corroborative material.⁶⁰

While the nwdw appears mostly in offering scenes⁶¹ (it is shown only once in the desert⁶²) the šs3w is found, in addition to these contexts,⁶³ in the animal list of the Ramesseum Onomasticon,⁶⁴ in the medical texts,⁶⁵ as an animal not born in winter⁶⁶ and as a metaphor for wasteful idleness.⁶⁷ The toponym read qhsty by Sethe⁶⁸ was considered by Keimer to be šs3wt because of the shape of the horns on the animal determinative.⁶⁹

Two large wild ruminants which belong to the goat and sheep families (Caprinae) are included here because they were represented by the Egyptians together with antelopes and there is no evidence to indicate that they were considered to fall into a separate category.⁷⁰ These are the Nubian Ibex (Capra ibex nubiana Cuvier) and the Barbary Sheep or Aoudad (Capra lervia ornata Audouin).⁷¹

The Egyptian names for these animals were nš⁷² and ib3w⁷³ respectively and they were included (and sometimes named) in hunting scenes⁷⁴ and in scenes and lists⁷⁵ of offerings. Meeks also recorded a word, ...ky as 'un nom de l'ibex?'.⁷⁶

From the number of times each species was depicted or mentioned the ibex would seem to have been the more common, or at least more frequently encountered, and its parts were frequently used in the medical texts.⁷⁷ Its sweeping annulated horns may have been associated with the sign 𐀓 or 𐀔 ; thus classical authors' reports that the Egyptians used the deer (ἔλαφος) to signify the year could be explained as a case of mistaken identity.⁷⁸

The presence of these mountain animals among antelopes of the desert plains such as the gazelle, oryx and addax brings into question the accuracy of Egyptian representations. This subject was discussed at length by Keimer⁷⁹ who was of the opinion that the ancient craftsmen intentionally (from artistic convention) depicted together animals which did not belong in the same habitat.⁸⁰ In Africa and the Near East today the Barbary Sheep and ibex overlap in a fairly extensive area bounded by the Nile and the Red Sea,⁸¹ the ibex being the more widely spread. The edge of the area covered in Egypt by the ibex seems to correspond broadly to the 200m contour. Given that this is not far distant, on average, from the Nile and that the Egyptians explored the Eastern Desert thoroughly in search of mineral deposits in connection with routes to the Red Sea they would no doubt have been familiar with the fauna of the Wadis (cf the inscription from the Wadi Hammamat

mentioning a gazelle - see ghst above). They must either have depicted together all animals of the hst, regardless of their precise habitat, or saw the hill-species sufficiently frequently on the flatter desert to regard them all as animals of 'the red land'. (See also on deer, below.)

'Im3t (Wb I, 79, 1-2) was understood by Wb as 'Weibchen des Steinbocks',⁸² ie the female equivalent of n13 for which no feminine form with .t is known. Two tombs are quoted where both the Im3t and n13-w are shown⁸³ and their gross morphology is remarkably similar. However, the phrase hmt Im3t,⁸⁴ 'female Im3t', which occurs in the tomb of Ti, would indicate that Im3t was a species name in its own right, with the female specifically designated here (again the animal shown is ibex-like).⁸⁵ In the same scene appears the similarly named hmt nwdw, and this construction (hmt + animal name) to designate the female of the species is by no means uncommon.⁸⁶ The example of Im3t from Dendera with triple determinative⁸⁷ should not, therefore, be taken as 'eine allgemeinere Verwendung für die Weibchen anderer Wildarten' (Wb)⁸⁸ but as denoting a single species; the determinatives are not of three different animals, but merely successively more cursive forms of the same hieroglyph.

It is possible that this animal was a wild goat, Capra aegagrus Erxleben.⁸⁹ The males of this species have horns very similar to those of the ibex. The horns of the females of both wild goat and ibex are smaller than those of the males - note the difference in size between the horns of the Im3t and n13 in Ti.⁹⁰

An untranslated animal name which has been considered to apply to the female hartebeest is hbn (Wb II, 487, 6: Art Kuhantilope) attested at Beni Hasan;⁹¹ it follows a pair of šs3w and is very similar to these. Loret⁹² concluded, 'Il est donc certain que ce mot... est le nom spécial de la femelle du Bubale' and compared m3i 'lion' and rw-3bw 'lionne', and the terms for bull and cow, boar and sow (sic).⁹³ The terms hbn and šs3w also appear in a fragment of papyrus preserving part of a list of offerings.⁹⁴ It is unlikely that hbn in a list of this type names a female; the only female animal regularly mentioned in offering lists is the cow, and other female animals as offerings are restricted to Old Kingdom tomb scenes. Hbn would appear, therefore, to designate an additional type of antelope similar to the hartebeest; the Tiang or Korrigum (both subspecies of Damaliscus lunatus Burchell) appear to be possibilities.⁹⁵

A number of representations of deer occur in ancient Egypt, though they were by no means abundant in the tomb reliefs. The greater proportion of the representations are on pre-Middle Kingdom objects; from that time onwards their numbers appear to have been on the decline.⁹⁶ Evidence for the disappearance of deer from Egypt is supported by a change in the word denoting this animal.⁹⁷ The ancient term, hnn (Wb II, 495, 19: der Damhirsch), is found up until the New Kingdom, appearing in certain reliefs⁹⁸ and in a number of medical texts;⁹⁹ the latest reference is in a list of tribute from Syria.¹⁰⁰ This term was replaced subsequently by a semitic word (iry) an early writing of which may occur in a Dynasty 19 text.¹⁰¹

It has been considered that the lack of skill with which the antlers of deer were portrayed indicated the Egyptians' unfamiliarity with the animal,¹⁰² and that deer were, therefore, always rare in Egypt. In general the antlers shown are not palmated (there are a few exceptions¹⁰³) which has led to the identification of the ancient Egyptian deer with the types of Red deer which occur today in North Africa and Arabia.¹⁰⁴ However, the Persian Fallow Deer (unlike the European type identified from one of the exceptional examples mentioned above¹⁰⁵) does not have antlers palmated solely at the upper end; palmation occurs rather near the base.¹⁰⁶ Nevertheless, because of the absence of palmation in most Egyptian representations it has been considered that both the Persian Fallow deer, 'D.d.mesopotamica Brooke,¹⁰⁷ and the Barbary Red Deer, Cervus elaphus barbarus Bennett (sometimes referred to as C.barbarus Gray), should be considered as translating hnn (and iry).¹⁰⁸

It seems (failing the discovery of a post-Dynasty 18 example of hnn) that the deer may well have disappeared from Egypt in a relatively short time c.1300BC (max. c.1450-1250BC) when hnn disappeared from the language. Joleaud¹⁰⁹ considered that they were lost from the wild even earlier than this, remaining only in parklands; these can no longer have been maintained after the Saite period, when representations of deer cease altogether.

The presence of deer in ancient Egypt is of particular interest in the reconstruction of African palaeoclimates, as today deer (Cervus elaphus barbarus) in Africa are confined to that part of coastal North Africa most closely related in climate and vegetation to Southern Europe.¹¹⁰ Joleaud¹¹¹ found evidence that this species had at some time reached even Eastern Africa. He also believed that the fallow deer

(Dama dama(L))¹¹² occurred in prehistoric Africa, perhaps as far west as Tunisia where it may have been imported by the Phoenicians. This deer is a native of the Mediterranean area¹¹³ and thus seems a likely prototype for the deer represented in ancient Egypt. Hilzheimer identified the Egyptians' deer (referring to the representation in the tomb of Montuḥirkhopshef) as Dama schaeferi, a species which he described from a specimen taken (possibly) from Tripoli.¹¹⁴ Joleaud considered that this example should be considered merely as a subspecies of the common fallow deer, and that it was this subspecies which was found in Egypt.¹¹⁵ Hilzheimer's binomen is today considered to be invalid;¹¹⁶ the only fallow deer types now recognised are D.d.dama L , the European Fallow Deer, and D.d.mesopotamica Brooke, the Persian Fallow Deer.¹¹⁷ The latter was until recently believed to be extinct;¹¹⁸ in the 1950's a small group was discovered north-west of the Persian Gulf near the Iranian border with Iraq.¹¹⁹ It is noteworthy that this is an area of steppe¹²⁰ land rather than the woodland with which the European subspecies is associated.¹²¹ Thus the presence of fallow deer in ancient Egypt cannot be used as proof that there was considerable forest surviving there until historic times as has been suggested.¹²² Doubtless the deer would have been able to extend its territory into previously inhospitable steppe or semi-desert areas of northern Africa during a period of increased rainfall such as is held by geographers to have occurred c.5000 BC. During the subsequent desertification in Egypt it would have survived only in the most favourable areas of the Nile Valley until environmental factors - or hunting - forced the population below its critical survival level.¹²³ From such evidence as survives this seems to have been the likely fate of the deer in ancient Egypt. It should, however, be noted that fallow deer, possibly introduced into Egypt, may have continued to live in the Wadi Natrun until the 19th century.¹²⁴

Giraffes (Giraffa cameleopardalis L)¹²⁵ are known from a number of rock drawings¹²⁶ and a few later Egyptian representations,¹²⁷ in one of which the animal is named mmy¹²⁸ (Wb II, 58, 14: die Giraffe). This term is known from only two other texts¹²⁹ : the tribute list in the tale of the Shipwrecked Sailor,¹³⁰ and the list of animals from the Ramesseum Onomasticon.¹³¹ A giraffe hieroglyph also appears in the Nauri Decree,¹³² and as the determinative of a word mwmw in the Coffin Texts.¹³³

The word sr 'foretell' (Wb IV, 189, 15 - 190, 17: vorhersagen, verkünden) is written with giraffe determinative, the connection being

presumably that the long-necked giraffe can see in advance those things about to affect smaller beings. Wb had (before IV, 189, 15) an entry for sr as an animal name (Wb IV, 189: das Tier, welches das Schriftzeichen darstellt, die Giraffe) but referred only to writings of sr as a verb.¹³⁴

The term sdnf (not in Wb), noted by Edel¹³⁵ from the temple of Niuserrē, appears over what remains of the hindquarters of a short-tailed animal in the process of giving birth. Edel suggested that this block was the continuation of another scene showing a number of named animals giving birth, in the top register of which is an ibex (or ibex-like animal), the hind parts of which are lost. However, if the base lines of the registers are made to correspond correctly, it can be seen that the ibex's back has an unexpected slope which indicates that the blocks probably do not fit together, and that sdnf cannot name the ibex.

Pkrh, also from the temple of Niuserrē,¹³⁶ might apply to an antelope-like creature too - all that remains of it is the lower part of one hind leg. It must have been small (c.20cm) as in these scenes the animals' names were generally written near the top of the register, and almost all of the next animal's name (gsfnw) is visible. (Pkrh therefore seems to extend the entire depth of the register.) Although the leg appears to have a hoof no antelope is this small, but the fragmentary nature of the representation makes it difficult to suggest any alternative.

Gardiner transcribed a term t[k]3 from the Ramesseum Onomasticon, where the word appears between ib3w (ibex) and mmi (giraffe) in a list of mammals.¹³⁷ He did not consider another reading possible, but perhaps the t3 (Wb V, 231, 4) of various offering lists of Ptolemaic date at Edfu¹³⁸ should be compared, as t3 could be read from the traces on the Onomasticon.¹³⁹ Both these contexts would seem to indicate a large ruminant. It is interesting to note here an unnamed antelope in an Old Kingdom relief, identified by Keimer¹⁴⁰ as the Roan/Horse antelope (Hippotragus equinus Desmarest), which today inhabits thinly treed grasslands from the Gambia to Somalia and from central to south Africa. It may also have been known in the Middle Kingdom,¹⁴¹ and should, therefore, be considered as a possibility in the translation of t3. The Kudu (Tragelaphus sp) has also been mentioned in Egyptological literature,¹⁴² and may be another possible candidate.

Chapter 3 : Bats

Only four drawings of bats are known from ancient Egypt; three of these are from the tomb of Bakt III at Beni Hasan¹ and the fourth is on an ostrakon from Deir el-Medîna .² Two of the Beni Hasan examples are named; the larger is called s3hmw (Wb IV, 24, 17: Art Fledermaus) the smaller d3gy (Wb V, 419, 3: Art Fledermaus). Three-dimensional representations of bats are also rare. Vandier d'Abbadie³ mentioned a glazed pottery amulet of Dynasty 19⁴, Ptolemaic bronzes of bats standing, with pierced ears and wings folded, in the manner of cat figures of the same date⁵, and a schist palette in the form of a stylized bat.⁶

The Beni Hasan bats have been the subject of various attempts at identification. Allen⁷ suggested the Egyptian Fruit Bat⁸ (Rousettus aegyptiacus E.Geoffroy)⁹ and the Tomb Bat (Taphozous perforatus E.Geoffroy).¹⁰ It should be noted that Allen thought the bats with wings outstretched (ie those named as s3hmw and d3gy) were both R.aegyptiacus, despite the difference in size of their wing spans (51.0 and 26.5cm respectively) and that the unnamed example with wings folded was T.perforatus; it should also be noted that the nose to tail-tip measurements of the s3hmw and bat with folded wings are almost identical, while that of the d3gy is about half this length. Kingdon¹¹ too noted the presence of R.aegyptiacus in Egyptian tomb paintings. Dawson¹² remarked only that the bats depicted were of the family Emballonuridae (Sheath-tailed Bats, of which T.perforatus is a member). Houlihan and Goodman¹³ merely allocated the Beni Hasan bats to the order Pteropodiada (Old World Fruit Bats), 'Owing to the rather poor condition of the representations today and because of the similarity between the many species of bat in present day Egypt'. Davies, in her publication of the bird and bat drawings at Beni Hasan,¹⁴ recorded only the bats' colours, 'drab brownish pink' (the s3hmw) and 'darker brownish red' (the d3gy).

Two of the bats at Beni Hasan (the largest, s3hmw, and the unnamed bat with folded wings) and the bat on the Deir el-Medîna ostrakon are all shown with tails free of any interfemoral membrane. (The same might have been true of the d3gy, but the representation is damaged at this point.) This feature of the Deir el-Medîna bat was commented upon by Houlihan and Goodman¹⁵ as being 'a characteristic feature of the rat-tailed bat' (Rhinopoma sp.). Although the tails of some present day bats are only half enclosed in this membrane very few have entirely

free tails as seems to be the case in the ancient Egyptian drawings.¹⁶ No leaf-nosed bats exhibit this characteristic¹⁷, and indeed the Egyptian representations show bats with mouse-like heads. From Hoogstraal and Sanborn's¹⁸ descriptions of the various bats inhabiting Egypt today¹⁹ the following species therefore seem most likely as identifications of the ancient bats : Rousettus aegyptiacus²⁰, Taphozous perforatus²¹, T.nudiventris²², Tadarida aegyptiaca²³, T.teniotis rüppelli²⁴, Rhinopoma hardwickei cystops²⁵, and R.microphyllum²⁶. Of these, the two most likely are those mentioned by Allen (above).

A term very similar to one of the bat names, dqyt, occurs as a bird name in the same scene²⁷ at Beni Hasan - the bird to which it applies may be a Painted Snipe (Rostratula benghalensis L).²⁸ This spelling, but with a bird rather than a man with raised arms²⁹ as determinative, also occurs in the medical texts, three times in preparations for eye complaints, two of which specifically involve the growth of hair in the eye. In all three cases the blood (snf) of the dqyt is used.³⁰ Another beast with a similarly spelled name, the drqyt, is used whole in a prescription in P.Ebers to treat a neck complaint.³¹

Barns³² compared the use of bat's blood in a Coptic prescription to prevent the growth of eyelashes³³ and concluded: 'We may, therefore, confidently assume that "bat" is meant here [in P. Ebers]'. Bat's blood causing blindness was mentioned in a demotic papyrus;³⁴ in another Coptic text bat's urine was used to cure dim sight.³⁵ Dawson³⁶ noted also that the most frequent use of bats in medicine of all ages was as a depilatory agent. This recalls the Ebers examples and lends weight to Barns' argument. It does not seem impossible that the Egyptians might have chosen a bird as the determinative for the name of a bat; the same sign determines the names of various insects which appear to have been included in a class of 'flying beasts' (see Ch. 1: Classification and Ch.20: Insects).

Černý, Westendorf and Vycichl all believed that Coptic ⲄⲓⲛⲄⲗⲱ 'bat' could have been descended from any or all of Egyptian d3gy, dqyt, and drqyt.³⁷ Vycichl noted two distinct Coptic forms, a southern type with N (such as ⲄⲓⲛⲄⲗⲱ) and a northern type without (eg Ⲅⲗⲗⲟⲩ). The latter form only was represented in the ancient Egyptian language, though the former is apparent in demotic gnql3.³⁸

No firm conclusion regarding the translation of dqyt can, therefore, be drawn from the available evidence. The word, which can be directly translated as 'the hidden one', is appropriate to both the skulking behaviour of the Painted Snipe and the nocturnal habits of most bats.



Chapter 4 : Cattle









Zeuner¹ stated that all domestic cattle were derived from the wild European Aurochs (Bos primigenius Bojanus), extinct since 1627, and described three variants as subspecies of this. These he called B.(B.)p.taurus L (European humpless domestic cattle), B.(B.)p.longifrons Owen (European short-horned cattle, sometimes given specific status as B.longifrons) and finally B.(B.)p.indicus L (the domestic zebu).² (Bos brachyceros Rütimeyer, he considered to be synonymous with and superseded by B.p.longifrons, but Boston considered them 'quite different').³ The ancient Egyptian race found in Neolithic deposits in the Faiyûm was described by Zeuner as 'a wild cattle, probably the southern form of B.primigenius'.⁴ Boston considered the first domesticates to be examples of 'the original native African cattle' with a light-coloured short-horned type, B.brachyceros, being imported from the Middle East during a population movement thence in the Neolithic period,⁵ a theory put forward by Dürst but left unconfirmed by Lortet and Gaillard after their samples failed to yield short-horned examples.⁶ They described the ancient cattle as B.africanus (Brehm) 'qui vit encore aujourd'hui en troupeaux immenses dans les plaines du Haut-Nil'.⁷ although no longer found in Egypt itself (Schweinfurth).⁸ Dürst also described as B.taurus macroceros a breed which survives in some modern central African breeds.⁹

The most modern records include Bos primigenius and B.indicus within the species of domesticated European and African cattle, B.taurus L,¹⁰ and all the cattle terms discussed here will be considered to designate this species or the ancestors thereof.

The shape of the horns of the cattle represented by the Egyptians seems to have struck researchers forcibly, and some have interpreted names of cattle at least partly in terms of these horn shapes.¹¹ Zeuner divided the native B.primigenius of Egypt into four breeds on the basis of horn types - a breed with small horns, a breed with lyriform horns, one with 'double lyre' horns and a hornless variety.¹² Andersson distinguished three types (long-horned, short-horned, hornless)¹³ as did Wilkinson (short-horned, long-horned and humped (zebu)).¹⁴ Hartmann further sub-divided long-horned cattle into those with lyriform, those with half-moon-shaped and 'mehr oder minder weit von einander abstehenden Hörnern'.¹⁵ Ghoneim,¹⁶ Darby¹⁷ and Kees¹⁸ all expressed similar views.

A closer examination of the representations and texts reveals this to be an inadequate approach. About eighty words were used by the ancient Egyptians to designate cattle - according to sex, age, colour and use,¹⁹ but apparently not horn shapes, though the precise import of some terms has remained elusive.

The most commonly occurring, and most general term for the cattle was ih (Wb I, 119,15 - 120,4: das Rind (das gewöhnliche Wort)).²⁰ It is possible that words written merely  or  are to be read ih as these sometimes vary with full writings in the same text.²¹ Writings with cattle determinative (Sign List E1) but without phonetic complements will not be included here; such writings are extremely common, particularly in the ostraca or offering lists and should simply be understood as 'cow', 'bull' or 'cattle', as the context requires.

Wb (loc.cit) decided that ,  could also be read ng or k3²² and in a limited number of cases this does appear to be true. Within cattle lists  alone is perhaps to be read k3, 'bull', since  (sometimes   'various [cattle]') may appear at the end of such lists referring to all the cattle mentioned.²³ In the Pyramid Texts ih pt sometimes varies with k3 (written only ,²⁴ Wb read certain of these examples even so as ih in an 'ideographische Schreibung'²⁵), which would indicate that the words had similar import. K3 and ih could also both be used in the same phrase where some contrast seems to have been intended.²⁶ , also appears in lists of livestock parallel to 'goats' (nh), 'sheep' (sr) and 'horses' (htri) which again indicates that this was a very general term.²⁷

The male ih is recorded in the stables (mdt), treading grain²⁸ and eating grass (sm)²⁹ - a proverbially uncontrolled activity. White and red ih are noted;³⁰ see below for 'white' and 'red' as terms for types of cattle. Ih were slaughtered³¹ and their hides (dhr) and other parts³² were used. They are attested in lists of offerings³³ and are recorded as being bought and sold and as the subject of court cases.³⁴ They were looked after by overseers (imy-r).³⁵

Ih had a feminine equivalent ih (Wb I, 120, 5-6: die Kuh),³⁶ sometimes specified as ih(t) hmt.³⁷ In other cases the gender of ih is indicated only by the definite article or possessive adjective.³⁸ K3 'bull' and hmt 'cow' seem to have been used where the gender of the animal needed to be emphasized; ih(t) seems to have been a rather neutral term. The ih is also mentioned accompanied by or in

association with its calves (bhs)³⁹ and in the stables (hy).⁴⁰ This word was used to describe Hathor⁴¹ (note the similar term hy naming the son of this 'cow' goddess).⁴²

The terms given to fully mature cattle were k3 'bull' (Wb V, 94, 7-96, 8 : der Stier; Wb V, 97, 1-16 : das männliche Rind, der Ochse) and hmt 'cow' (Wb III, 76, 4-14: Kuh, weibliches Tier) (also read idt,⁴³ k3t⁴⁴ or hnrt).⁴⁵ Both terms were applied to other animals denoting 'male'⁴⁶ and 'female'⁴⁷ respectively (note that both are written with signs representing the reproductive organs).

Bulls and cows are labelled k3 and hmt in various tomb scenes⁴⁸ and the terms appear together in several other texts.⁴⁹ In one text from Medinet Habu the words head two lists of cattle - the first of males, the second of their female equivalents.⁵⁰ Writings as k3 t3y 'male bull' may be errors.⁵¹

The bull appears in representations and in texts as potent⁵² and aggressive⁵³ - death by trampling was feared⁵⁴ - and as such was considered a suitable metaphor for the reigning or deceased king.⁵⁵ The king and his soldiers in battle were occasionally likened to bulls.⁵⁶ References to the king as the 'strong bull' (k3 nht - Wb V, 95, 8 : der starke Stier) are extremely numerous, and not listed here, though it is worth noting that in modern Africa the bull is still identified with 'political influence, authority or office'.⁵⁷ K3 nht was also used as an epithet of deities, together with k3 rnp (Wb V, 95, 10-11 : der jugendstarke Stier, see too Wb V, 97, 14), k3 stt (Wb V, 95, 12-14: ...begattender Stier...) and k3 nk (Wb V, 95, 12-14 : begattender Stier);⁵⁸ 'bull of the west' (k3 imntt) was also used of Osiris.⁵⁹ K3 named people⁶⁰ as well as deities⁶¹ and places.⁶² Cows were also associated with various deities,⁶³ notably Hathor,⁶⁴ and seven cows were held to inhabit the sky.⁶⁵

Bulls were sacrificed⁶⁶ and appear in tribute or offering lists⁶⁷ (sometimes the phrase 'bull of the herd' (k3 (n) idr: Wb V, 98, 1: als Bez. einer bes. Rinderart) is used)⁶⁸ and were evidently considered valuable (more so than cows)⁶⁹ - a rich man could be described as g3 k3w 'with many bulls'.⁷⁰ A bull's hide is mentioned in one text and its horns in another,⁷¹ and various other parts of bulls were used in the medical texts⁷² (see below for the use of cows' milk in these texts); medical treatment for a bull itself is recorded in a veterinary papyrus.⁷³ Vessels were described as being decorated with the 'faces of

bulls,⁷⁴ and cakes in the shape of bulls are also recorded.⁷⁵ Both red and white bulls⁷⁶ are mentioned; see lh above and hd and dšr below. Bulls were recorded as 'bellowing' (hmhm)⁷⁷ and as state property.⁷⁸ They were attended by overseers.⁷⁹

Cows also appear in offering lists;⁸⁰ the designation hmt wrt (cf k3 wr)⁸¹ occurs as a variant of hmt in this context.⁸² Wrt (Wb I, 331, 15: göttliche Kuh) is also attested alone as the name of a deity in the form of a cow;⁸³ wrw (Wb I, 331, 14 [in the toponym hwt wrw]) also seems to have denoted cattle.⁸⁴ The phrase hmt nfrt is also found.⁸⁵ Nfrt (Wb II, 261, 13-14 : die Kühe) is attested independently elsewhere as a designation for cows, and had an apparent masculine counterpart nfrw (not in Wb) which appears in a list of cattle.⁸⁶ Both were used in agriculture; nfrt are depicted ploughing (cf rwnyt)⁸⁷ among other things,⁸⁸ and nfrw treading seed.⁸⁹ Nfrt were also used to pull coffins.⁹⁰ They were especially attached to the temples of Amun,⁹¹ and also associated with the cow-deity Hesat.⁹² Nfrt were apparently of sufficient maturity to be mated;⁹³ the term nfrt was also applied to women between childhood and maturity⁹⁴ and Clère⁹⁵ noted of the word: 'ce n'est donc sans doute pas un terme général significant "vacher", mais un mot de sens plus restreint s'appliquant à des bêtes encore jeunes, des génisses ou les vaches qui viennent d'avoir leur premier veau'.

Cows were often depicted in tomb scenes giving birth to or together with calves and being milked;⁹⁶ many terms for cows other than hmt are derived from these images.

ʾIryt (Wb I, 114, 18: Milchkuh)⁹⁷ is related to ʾrtt 'milk' (Wb I, 117, 1-6: die Milch). Wb recorded a similar term ʾrty (Wb I, 116, 6: 'zur Milch gehörig'; Wb I, 116, 7: Auch allein für Milchkalb)⁹⁸ but this only occurs in the phrase bhs ʾrt and would seem to indicate a calf before weaning still dependent on its mother for food. Mnʿt, a 'nursing-cow',⁹⁹ (Wb II, 78, 10: die Milchkühe; compare Wb II, 78, 1-9 : die Amme and Wb II, 77, 10-13: säugen), was also used for milking, like the ʾryt¹⁰⁰, and occurs in offering lists¹⁰¹ and elsewhere.¹⁰² In one text¹⁰³ it is mentioned in parallel with the mhyt (Wb II, 113, 16 : Milchkuh), the name of which may be associated with mhr 'milkjug' (Wb II, 115, 5-8 : Milchkrug) var. mhī (Wb II, 113). Mhr also occurs as a verb 'to milk, to suckle' (Wb II, 115, 9-16) and as a noun designating dairymen (Wb II, 115, 18 : der Melker), and in the Ptolemaic Period, cows (Wb II, 115, 17 : die Milchkuh).

A further term apparently denoting a cow appears only once in a description of the goddess Anat; this is 'mryt (Wb I, 187, 4 : Milchkuh).¹⁰⁴ In a text from Tanis Ramesses II is described as 'the suckling (mhr) of Anat'.¹⁰⁵ which again identifies her as a cow. In Sumerian the very similar amar means 'young bullock',¹⁰⁶ but no masculine equivalent of 'mryt is known at present from the ancient Egyptian texts. A variant writing of 'mryt in 'syllabic orthography' on an ostrakon would indicate that it was a loan-word from a Semitic original.¹⁰⁷

Another term recorded by Wb as denoting cows, sbnt (Wb IV, 90, 1: Bez. für Kühe), appears with cow determinative only in the Pyramid Texts;¹⁰⁸ the verb sbnt has been translated 'suckle'.¹⁰⁹ - compare Wb IV, 90, 2 (hrd n sbnt): Säugling - though Vandier compared bnn 'engender' (Wb I, 460, 6-7).¹¹⁰

A cow in calf was described as bk3t 'pregnant' (Wb I, 81, 14: Mutterkuh; compare Wb I, 481, 1-11: schwanger werden, s. sein; schwängern),¹¹¹ a term also used of other animals - a gazelle (ghs bk3t) and a pig (ibk3). Cows (hmt) were noted for their care of their young,¹¹² and their contentedness in so doing - the verb 3ms 'be pleased' (Wb I, 11, 7 : Verbum. Von der Freude der Kuh am saugenden Kälbchen oä) has as determinative a cow turning her head towards her suckling calf. The contentedness of cattle is also reflected in the verb iw3 (Wb I, 49, 12: sich freuen) with cow determinative; iw3 is well attested as the name for a type of cattle (see below).

Other words applied to cows are (or may be) female equivalents of terms for male cattle : wndt (not in Wb), var. wndyt (Wb I, 326, 4: Rindvieh), rwnyt (Wb II, 409, 1: Kuh, die noch nicht gekalbt hat), hr-s3t (Wb III, 135, 8), drt (Wb V, 585, 9), bhst (Wb I, 469, 11), w3bt (not in Wb) and sm3t (Wb IV, 128, 8-10). These are discussed together with the masculine terms below.

Much of what has been written concerning the iw3 (Wb I, 49, 9-11: Rind)¹¹³ and the ng (Wb II, 349, 1-5 : Art große Rinder mit langen Hörnern), apparent variant gw,¹¹⁴ seems to have been derived from the ideas of Montet,¹¹⁵ whether or not the source is acknowledged.¹¹⁶ The only substantial earlier work was by Jéquier on the ng,¹¹⁷ and this type was also the subject of an article by Otto.¹¹⁸

Montet distinguished the iw3 and ng in terms of appearance and habitat : 'le ioua, plus corpulent, demeurait généralement à l'étable, tandis que le neg, plus farouche, vivait dans les prairies'. The ng, he noted, 'est moins corpulent et plus haut sur pattes'; 'les cornes sont magnifiques, très acérées, généralement évasées aussi bien chez le mâle que chez la femelle, quelquefois elles sont droites et petites', though he also remarked occasional hornless examples.¹¹⁹

Examination of the representations in which the two types appear together¹²⁰ shows that the differences in build quoted above are by no means consistent, and variations in the build of cattle labelled with the same name is also visible.¹²¹ Most of the representations discussed below show the rn iw3 or rn ng as well as animals named iw3 or ng alone. Rn does not seem to denote an outward characteristic of the beasts; the term is discussed further below. The ng does often have medium-length or long horns, but occasional hornless examples,¹²² together with one showing abnormally shaped horns,¹²³ are known. Horn deformation is more common among the iw3¹²⁴ which may have horns of any length¹²⁵ or be hornless.¹²⁶ Hornlessness is a naturally occurring phenomenon¹²⁷ and the presence of hornless cattle in the tomb scenes is not in itself evidence that the ancient Egyptians practised polling. Even though zoologists have divided breeds of cattle according to horn shape, this was clearly not the way the iw3 and ng were distinguished,¹²⁸ and care should be taken not to divide unnamed animals in the reliefs into iw3 and ng solely on the grounds of their appearance.¹²⁹

Jéquier described the ng as semi-wild, caught by lassoing (sph), though it was evidently differentiated from true desert animals as it was never depicted with them. This lassoing appears to have had some ritual significance;¹³⁰ though there is a picture of a iw3 being lassoed this was obviously of lesser importance as it never became part of a ritual.¹³¹ Jéquier deduced from comparison with the term ng 'kill' that this animal was for sacrifices and to be butchered.¹³² (Note, however, that there is also a term ng (Wb II, 348, 4-5) meaning 'cry out' which might indicate that the name ng was derived from the animal's lowing.) Montet asserted, on the other hand, that 'le boeuf ioua était l'animal de boucherie par excellence',¹³³ and its importance in this respect was also noted by Ghoneim.¹³⁴ Fattened examples (iw3 dd3: Wb V, 631, 7-9: Rind uä) are mentioned several times.¹³⁵ They were often sacrificed¹³⁶ and mentioned in connection with festivals.¹³⁷ Both iw3 and ng are very frequently attested in offering¹³⁸ and

tribute¹³⁹ lists and in tomb scenes.¹⁴⁰ Nq also appears in the Pyramid Texts.¹⁴¹ The iw3 was recorded from Kush,¹⁴² and the parts of its body were used in the medical texts, and elsewhere.¹⁴³

'Iw3 are frequently mentioned in conjunction with mdt 'stalls',¹⁴⁴ (Wb II, 185, 1-7: Viehhof, Stall), like other domesticated (or semi-domesticated) animals,¹⁴⁵ though the ng are not. Both iw3 and ng are shown in the fields (mr)¹⁴⁶ and could be tethered,¹⁴⁷ led,¹⁴⁸ driven¹⁴⁹ and similarly bedecked with flowers.¹⁵⁰ This evidence gives the lie to the assertion that the ng and iw3 were from different habitats and stages of domestication and treated substantially differently.¹⁵¹ The ng was also used for transport¹⁵² and for treading seed into the ground.¹⁵³

The females of both types are mentioned in Egyptological literature.¹⁵⁴ The female equivalent of ng seems to have been simply hm(t) or hm(t) wr(t).¹⁵⁵ A feminine form of iw3, iw3t (Wb I, 49, 13: Kuh), is attested though the term is applied to males¹⁵⁶ as well as females¹⁵⁷ (Wb I, 49, 14: als Kollektivum : Rindvieh?) and appears as the name of a type of loaf (Wb I, 49, 15: Art Weißbrot in Form eines Rinderkopfes) and of the children of Hathor.¹⁵⁸ The masculine form iw3 is also used of cows.¹⁵⁹

In the list of male and female cattle at Medinet Habu mentioned above, where the lists are headed by k3 and hm(t), ng follows k3 in the list of males and has no specific female equivalent. This would indicate that the female ng was called hm(t), as is suggested by the parallelism of ng and hm(t) in the offering lists. Sometimes, a 'male ng' (ng t3y) is specifically named;¹⁶⁰ this, like k3 t3y (see above) may be an error. The Medinet Habu lists end with the terms bhs and bhst, denoting calves (see below), from which it may be concluded that the lists are arranged in order of age. Ng would, therefore, be a sub-adult male.¹⁶¹ As most representations of the ng do not show the animals' testicles it might be assumed that ng was a castrated adult; in a few cases, however, they are shown intact¹⁶² (compare representations of k3)¹⁶³ and in a few cases k3 'bull' replaces or parallels ng in variant texts.¹⁶⁴

'Iw3 almost always seem from the tomb scenes to have been castrated, though in other cases they evidently were not,¹⁶⁵ and the specific mention of 'castrated iw3' (iw3sb3) likewise suggests that iw3 does not necessarily denote a castrated bullock.¹⁶⁶

'Iw3 also appears in combination with the names of other animals (as do k3, hm(t) and bhs)¹⁶⁷ - the oryx,¹⁶⁸ gazelle¹⁶⁹ and ibex¹⁷⁰ and possibly also the ng.¹⁷¹ As these were animals which the ancient Egyptians at least attempted to domesticate Junker¹⁷² explained iw3 thus : 'Am wahrscheinlichsten ist die Bezeichnung der auf Fleisch gezogenen Tiere, der Mastrinder'. In one text iw3w nw ni3w is paralleled by wnm(w) n ib3w,¹⁷³ which would indicate a connection between iw3w and wnmw. Wnmw with cattle determinative is obviously related to wnm 'eat' (Wb I, 320,1 - 321,12: essen) so Junker's suggestion may well be correct.

'Iw3 itself is sometimes qualified in the phrase rn(n)(n)iw3.¹⁷⁴ Since both iw3 and this phrase can appear together¹⁷⁵ it is evident that some differentiation between the two was intended, though in one text 5 rn iw3 are described in an accompanying inscription as iw3 only.¹⁷⁶ Rn (Wb II, 429, 1-5: Jungtier oä als auszeichnende Bezeichnung für Vierfüssler, die zum Schlachten bestimmt sind) also appears combined with k3, ng and bhs¹⁷⁷ as well as the names of other animals which were (semi-)domesticated, including hyaenas.¹⁷⁸ The original Zettel for the Wb entry compared Coptic pooyne 'virgin',¹⁷⁹ and this comparison has been made by other authors.¹⁸⁰ A similar translation was put forward for the feminine term rnnyt (Wb II, 409, 1: Kuh, die noch nicht gekalbt hat).¹⁸¹ Although the masculine rn(n) first appears as a qualifier it later occurs independently denoting cattle (Wb II, 435,13: Art Rind - or should this read rn n ih ?)¹⁸² and variant forms rny, variant rnw, rnyw (Wb II, 429, 8: Jungstier) are also attested.¹⁸³

It has been suggested that rn denoted animals which were suitable for sacrifice either in terms of purity (ie 'virgin')¹⁸⁴ or because of their youth. As rn is applied to apparently adult animals it would, therefore, indicate young adults;¹⁸⁵ however, this would not explain the appearance of a rn bhs (see below).¹⁸⁶ Nevertheless, animals not described as rn were often named as offerings so rn must indicate an additional (desirable) quality. This is not a quality which can be detected from the reliefs. Some have suggested 'domesticated',¹⁸⁷ as a translation, but rn is also applied to animals described as 'of the desert'.¹⁸⁸ In view of these problems it seems best to leave the translation of rn until some unequivocal evidence comes to light.

The Medinet Habu cattle list has already been referred to above in connection with the discussions of k3 and ng and what is apparently their female equivalent, hmt. The last member of the list of terms for

male cattle is bhst t3y and for females bhst (Wb I, 469, 4-10: das Kalb; Wb I, 469, 11 (bhst): fem. zum vorstehenden Wort). In various other texts bhs appears to designate young cattle¹⁸⁹ (note especially the records citing bhs with cows and their 'mothers'¹⁹⁰ and representations showing obviously young calves¹⁹¹) and sometimes even new-born animals.¹⁹² A representation of a bhs at Deir el-Gebrâwi showing a calf being encouraged to drink from a bowl¹⁹³ may indicate that bhs designated the young unweaned animals. From this evidence it may be deduced that the Medinet Habu list arranges the cattle in descending order of maturity, with bhs the lowest age group. Certain phrases, however, seem to belie this interpretation, as does the representation of the rn bhs in Copenhagen; the animal shown, although hornless, is as large and heavily built as the two rn iw3 which precede it (for further discussion of this animal see rn above). Wb clearly also saw this as a problem, noting various references to bhs under the heading 'hornlose erwachsene? Rinder'.¹⁹⁴ Bhs w3d 'young bhs',¹⁹⁵ (compare the k3 w3d and ih w3d¹⁹⁶) and bhs šrī 'little bhs',¹⁹⁷ (cf the ih šrī mentioned by Janssen¹⁹⁸) could indicate different age groupings within the group 'bhs'. Bhs s'b, 'castrated calf', (Wb IV, 81, 16: kastriertes? Kalb), indicates a further subdivision of bhs.¹⁹⁹

Bhs was used of animals other than cattle, notably sheep and oryxes,²⁰⁰ and thus appears to have been a general term for young animals, as hmt 'cow' was for all female animals. (The phrases bhs h3bw and bhs hwrr are perhaps not to be included among such usages although both h3b and hwrr are attested as animal names;²⁰¹ note, however, the phrase ih km h3bw from P.Boulaq VI ²⁰² and the spotted calf described as bhs hwrrty in the Book of the Dead.²⁰³)

Bhs were given as offerings,²⁰⁴ most notably in the ritual hwt bhs²⁰⁵ in which four calves of different colours (black, white, red and variegated) appear. Bhs appears in the medical texts²⁰⁶ and man's heart is compared in a song to a sickly calf;²⁰⁷ in the Pyramid Texts bhs occurs in parallel with an otherwise unattested term h3d (Wb III, 237, 1: parallel zu 'Kalb (bhs) von Gold') as the child of the hs3t-cow.²⁰⁸ Bhs has been compared with an Arabic word and may be derived from a common Semitic root.²⁰⁹

Ms, which also designates the young of cattle,²¹⁰ is a later term; while bhs appears in the Pyramid Texts,²¹¹ ms does not. Both are found in Coptic - mac 'young, mostly of animal or bird'²¹² and Ⲅⲁⲗⲓⲥⲉ 'heifer'.²¹³

Another term for a calf (Wb V, 361, 1: Kalb) may be found in the writing of the toponym tb-ntr (Coptic $\chi\epsilon\mu\lambda\omicron\gamma\tau$, Gr. $\Sigma\epsilon\beta\acute{\epsilon}\nu\nu\omicron\tau\omicron\varsigma$) which sometimes shows a calf alone or lying at the feet of a cow.²¹⁴

Between the most and least adult animals in the Medinet Habu cattle list lie hrs tsv (fem. hrst) (Wb III, 135, 7: Art Rind; III, 135, 8: fem. zum vorsteh. Wort and III, 150 - var. writing only) and d(r)(t) (Wb V, 585, 8-9: als Bez. für kleine Kälber and Wb V, 585, 10: männliches Kalb). Both types are depicted in the tomb of Rekhmirē.²¹⁵ The same scene also shows ng3w and wndw and is, therefore, useful for comparing the types of cattle and confirming the order of the Medinet Habu list. On the upper register the hr-s3 are depicted beside the ng3w (twice) and wndw (once) - five of them are hornless, three have short horns (shorter than those of the wndw). On the lower register are four animals, proportionately larger than those on the upper register but similar in build and shape (all have short horns of similar length to those of the wndw behind them). The d(r)t depicted on the same register by the ng3w is smaller than the ng3w and wndw behind it; the restoration of the top of its head shows short horns (like the hr-s3 of the top register).

Hr-s3 is found in cattle lists in various papyri²¹⁶ and an ostrakon.²¹⁷ In some but not all of these the order is similar to the Medinet Habu list. In another papyrus drt follows another cattle term (mr; see below).²¹⁸

In the Pyramid Texts²¹⁹ the occurrence of hr-s3 in a punning phrase ('you are behind him (lit. 'at his back') as a hr-s3' (lit. 'an at (his) back [cow]')) has been used to support the translation 'later, elder (animal)' that is, one no longer a calf.²²⁰ Newberry gave 'two-year-old ox' for hr-s3 and 'yearling' for dt;²²¹ these were regarded as 'plausible' translations by Edgerton & Wilson. Two more examples of hr-s3 are recorded in the Coffin Texts and on a tablet in Turin (6237: Amenemope 24, 1-25, 9).²²² Another example of drt is found at Abydos.²²³

In all cases where both hr-s3 and d(r)t occur, hr-s3 precedes d(r)t, and may have been given priority because of its greater age; the translations 'bullock/heifer' or 'two-year-old' (hr-s3) and 'yearling' (d(r)t) cannot, without further evidence, be confirmed.

Two further terms for cattle are apparently derived from the animal's age: mnḥ (not in Wb) - compare the term designating a young man (of an age between that of hrd and g)²²⁴ - and rnp (Wb II, 434, 20: junger Stier als Bez. des Month). Both occur with cattle determinative only in Ptolemaic texts, but a phrase mnḥ n k3 does occur on an ostrakon.²²⁵ The determinative here is also of a man, so it may be surmised that both the terms were borrowed human age terms.

Wndw as an animal name appears in the Old Kingdom with goat determinative but from the Middle Kingdom this writing disappears and wndw with cattle determinative (Wb I, 326, 2: Art Rinder mit abgeschnittenen Hörner seems to take its place. Wndw (goat det.) is attested in animal lists following ḥw3 (see Ch.7: Goats) and it is noteworthy that wndw (cattle determinative) also almost invariably appears in lists immediately after ḥw3.²²⁶

A very noticeable feature of representations of the wndw is that their horns are short and often have blunted ends as if they had been trimmed (cf Wb entry)²²⁷ though others are hornless.²²⁸ Ghoneim commented (Rind, p.80): '☞☞- wnd wird in der Tat meist verwendet als Bezeichnung der künstlich enthörnten Rinder, wird aber auch für die Rinder mit kurz abgesägten Hörnern gebraucht, die aber erst dem Mittleren Reich belegt sind'. Exceptions may be indicated at Abydos, where the determinative of wndw is hornless, and at Beni Hasan, where a label to a scene names ḥw3, wndw and k3 but all the cattle depicted are long-horned;²²⁹ and a rn n wndw in an offering scene at Luxor has medium-length horns²³⁰ (cf the long-horned wndyt²³¹). A young calf is once designated wndw²³² and on two occasions wndw is combined with bḥs 'calf'.²³³

The word wndw does not give a clue towards the meaning of the cattle term; words written wndw are recorded in Wb from a few very disparate contexts.²³⁴ Maspero²³⁵ and Andersson²³⁶ both analysed the word as wn + dw, Maspero from wnw 'le taureau chargeant' and dw 'la montagne', deducing the meaning 'le boeuf de la montagne' or 'le boeuf sauvage'. Andersson compared the term for a mirror, wn-hr (Wb I, 313, 7: Bez. des Spiegels), lit. 'that which opens the face', (ie 'that which shows or reflects the face'), and interpreted wndw as 'ce qui montre (un) la forme d'une montagne (tu)', which he believed referred to the shape of the top of the animal's skull once the horns had been removed.

Hr-db^c (Wb III, 136, 6: hornloses Rind) - the reading hr -^cnt has also been suggested²³⁷ - is often taken to be a designation of hornless cattle²³⁸ since all the animals over which this name appears are hornless.²³⁹ It has also been asserted that hr-db^c was applied to dehorned cattle (cf wndw above).²⁴⁰ As has been seen in the preceding pages, however, while it is clear that the ancient Egyptians' cattle included long-horned, short-horned, dehorned and hornless beasts, the Egyptians did not distinguish their cattle on this criterion (alone). Among the named representations of cattle it is noticeable that lw₃, ng and k₃ all comprised animals with various horn lengths or no horns at all. While hr-db^c is unusual in that all the cattle so named are hornless this cannot be accepted uncritically as a term for hornless cattle.

In two instances hr-db^c is found in close association with other cattle terms, once in the phrase lw₃ n md₃t hr-db^c (only one animal appears under this heading so it can be assumed that the whole phrase refers to it)²⁴¹ and in the tomb of Meresankh at Giza (in the sentence tt bhs šdi hr db^c).²⁴² Rn hr-db^c also appears;²⁴³ for rn see above.

Goedicke²⁴⁴ translated the Meresankh text 'pulling the calf which was suckled upon the finger'²⁴⁵ comparing Junker's and Montet's translations 'daß das Tier mit den Fingern gefuttert, genudelt wird'²⁴⁶ (cf Wb IV, 564,17 - 565,15: säugen, aufziehen) and 'celui qui est sur le doigt', 'celui qu'on conduit au doigt'²⁴⁷ (cf Wb IV, 560,8 - 562,19: nehmen, fortnehmen, herausnehmen uä) respectively. The latter is unlikely to be the meaning here, since the animal is being led on a cord like the lw₃ and lw₃t which precede it. It is possible, therefore, that hr-db^c does refer to the method by which the calf was fed. In any case hr-db^c is clearly a descriptive phrase and not of the same order as the age terms recorded in the Medinet Habu cattle list. Andersson explained the disappearance of hr-db^c after the Old Kingdom by supposing that it was subsumed under the term lw₃;²⁴⁸ available evidence neither confirms nor denies this.

Another term with descriptive force which has a cattle determinative but is used in combination with a different animal name (ib₃w - see Ch.2 : Antelopes and Similar Animals) is wnm (Wb I, 321, 20: Masttier(?).) The term appears only once, in the Coffin Texts, in parallel with lw₃, which may be of use in the further interpretation of that term (see above lw₃ for text and discussion). The word is presumably derived from wnm 'eat' (Wb I, 320, 1-321, 12: essen).

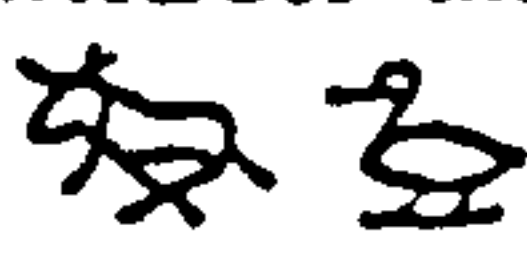
Four other Egyptian terms for cattle were derived from their colouring : hd.t 'the white' (Wb III, 212, 4: als Name eines (heiligen?) Rindes) and dšr 'the red' (Wb V, 492, 12: Rind, das zu Opfern bestimmt ist) are recorded by Wb only from Ptolemaic texts (compare hd and dšr describing ih and k3, above), but kmt 'the black' (Wb V, 125, 5-9: Bez. für heilige schwarze Rinder)²⁴⁹ and s3bt 'the piebald' (Wb IV, 18, 3: bunte Kuh)²⁵⁰ are both preserved from earlier periods. These four colours are also the colours of the four calves of the hwt bhs ritual mentioned above (see bhs) and bulls of red, black and white (and assorted combinations of these colours) are noted in the Ramesseum onomasticon.²⁵¹

Other types of cattle names seem to have been derived from the use to which the cattle were put - for example, traction. Htrī (Wb III, 199, 8-10: Gespann der Rinder), sometimes showing as determinative two cattle attached to a plough,²⁵² was used of a team pulling a plough or cart.²⁵³ The term also appears in the medical texts.²⁵⁴ In the New Kingdom the words n ihw 'of cattle' were added to the term to distinguish it from the same word which was then commonly applied to horses.²⁵⁵ Sk3 (Wb IV, 316, 11: der Pflugstier),²⁵⁶ from the root sk3 'plough' (Wb IV, 315, last entry - 316, 9: pflügen), emphasizes the rôle of cattle in ploughing,²⁵⁷ though donkeys²⁵⁸ and goats²⁵⁹ were also used for this. Nhbw (not in Wb) possibly related to nhb 'harness', 'yoke' (Wb II, 293, 3-7; II, 293, 1-2: Joch, cf nhbt: Wb II, 292, 9-16: der Nacken, der Hals) has been translated 'draught-cattle',²⁵⁹ similarly one of the terms from the Ramesseum Onomasticon, ith (not in Wb but cf Wb I, 148, 12-23: ziehen), is explained (as restored and translated by Gardiner) 'That is a draught-ox(?)...'.²⁶⁰

In the Pyramid Texts²⁶¹ there is a passage in which several terms with cattle determinatives appear in punning phrases and it is notable that many of the puns concern verbs of violent action - strike, kill, hit etc. One of the terms, id (Wb I, 152, 2: Bez. für ein Rind), occurs only here, as does its corresponding verb (Wb I, 152, 1: Verbum). Another, pd (Wb I, 569, 6: Bez. eines Rindes), which Wb compared with pd 'niederstrecken' (Wb I, 567, 8 - 568, 13), is attested both from the Coffin Texts,²⁶² where the deceased promises not to eat the butchered animal, and in a record of offerings.²⁶³ Both these contexts suggest that pd designated a sacrificial (or sacrificed) animal.²⁶⁴

Wb recorded ṣsr (Wb IV, 547, 8-9: Schlachtrind) only from Ptolemaic texts, exceptions being the above Pyramid Text and²⁶⁵ late attestation which is unfortunately fragmentary.²⁶⁵ At Abydos the term appears in parallel with nq3w²⁶⁶ (see above for nq3w); these both occur again on an offering list now in Leiden.²⁶⁷ Such references were discussed at length by Otto²⁶⁸ who, following Sethe,²⁶⁹ believed that ṣsr, related to ṣsr 'arrow' (Wb IV, 546, 7-17: der Pfeil), was derived from the method of killing the animal: 'the more general meaning, "a bull killed by an arrow" seems to be more natural as the original conception... Thus ṣsr seems by no means to denote a species of cattle but is an appellative derived from a special way of killing'.

The remaining term from the Pyramid text set, sm3 (Wb IV, 123, 14-17: Schlachtopfer; Schlachtstier, Schlachtrind & Wb IV, 124, 1-7: der Wildstier), fem. sm3t (Wb IV, 128, 8-10: das Weibchen des Wildstiers), may be related to sm3 'kill' (Wb IV, 122,7 - 123,11: töten). Only three of Wb's references to the sm3 as a sacrificial animal are from pre-Ptolemaic texts, all from the New Kingdom.²⁷⁰ The translation of sm3 as 'wild ox' is owed to representations of these cattle among other desert animals;²⁷¹ as such they could be hunted.²⁷² The king was described as a sm3²⁷³ and in the Pyramid Texts was identified especially with the sm3²⁷⁴ or sm3 wr.²⁷⁵ Sm3 was also the name of a warship;²⁷⁶ the tails of sm3 were used on boats.²⁷⁷ The species was identified as Bos africanus Brehm or Bos primigenius Bojanus by Hilzheimer;²⁷⁸ Dürst,²⁷⁹ however, believed the 'wild' cattle to be feral examples of the domestic type.

Another cattle term derived from a verb meaning 'fell', 'kill' is hryt (Wb II, 322, 6 - 323, 7: Schlachtvieh)²⁸⁰ var. hrt (Wb III, 322). In the determinative the animal is often shown tied up in preparation for butchering.²⁸¹ Indications that hryt was not specifically a cattle designation but rather a term for a (ritually sacrificed) offering, which might consist of cattle, are provided by the double determinative  in an Old Kingdom Mastaba and in the Book of the Dead²⁸² and by the phrase k3/ih n hryt (specifying that the hryt here does refer to cattle rather than any other type of animal) also in the Book of the Dead.²⁸³

Other terms appear to be derived from the bull's habit of fighting; Wb recorded mr (Wb II, 106, 8: Kampfstier) and hww (Wb III, 45, 2: Bez. für (kämpfende) Stiere) from scenes of fighting bulls,²⁸⁴ and gave

three more terms with similar translations : pry 'which sets, starts off' (Wb I, 526, 2: als Bez. des Kampfstiers)²⁸⁵, tnw (Wb V, 359, 13: Kampfstier),²⁸⁶ the determinative showing a bull pawing the ground before its attack, and wšb, 'the answerer, opponent' (Wb I, 373, 4: Bez. für den Kampfstier),²⁸⁷ which appears to have a female counterpart wšbt (not in Wb).²⁸⁸

A further small number of terms for cattle of various etymologies are known: ṛw (Wb I, 114, 4-5: Abgabe vom Vieh, bes. von den Rinderherden),²⁸⁹ var. ṛyt,²⁹⁰ w'b-r (Wb I, 284, 16: Art Rind),²⁹¹ wdw (Wb I, 398, 13-14: freiumher-schweifende Rinder)²⁹², nw (Wb II, 218, 1: in (k3)-nw : Art Rind)²⁹³, nr (Wb II, 279, 6: ob identisch mit dem Vorstehenden, ie nr Hirt, Hüter)²⁹⁴, nḥrw (Wb II, 298, 13: Art Frohnde)²⁹⁵, ḥ3t (not in Wb)²⁹⁶, ḥrp (Wb III, 329, 15: Bez. für Rinder: Zinstrinder)²⁹⁷, sbḥyt (Wb IV, 91, 9: [in] ḥrw sbḥyt: Rindergebrüll),²⁹⁸ tpy (Wb V, 296, 5-6: Art Rind)²⁹⁹, and tnwt (Wb V, 379, 16: Bez. für Rinder), var. tnnt (Wb V, 376, 3-4: die heiligen Kühe der Hathor).³⁰⁰ Two further terms, ḥsmt (Wb III, 333, 2: in dem lokalen Titel [ṛmy-r ḥsmt ḥnrw] & III, 296, 10) and mrḥw (Wb II, 112, 5-8: ein Gott in Tiergestalt) are found only in titles.³⁰¹

Chapter 5 : Dogs and Similar Animals

The wild canidae¹ are represented in Egypt today by the Common, Oriental or Golden Jackal (Canis aureus L), in particular the subspecies C.a.tripolitanus,² C.a.nubianus³ and the Egyptian or Wolf-like Jackal (also 'Egyptian Wolf') C.a.lupaster,⁴ the Red Fox (Vulpes vulpes L) with V.v.niloticus Geoffrey⁵ in Egypt, the Sand or Rüppell's Fox (V.rueppelli Schinz) and the Fennec (Fennecus zerda (Zimmermann)). There are a number of other canids now inhabiting northern Africa which may at one time have been present in Egypt, notably the Side-striped Jackal (C.adustus Sundevall), the Black-backed Jackal (C.mesomelas Schreber), the Abyssinian Wolf or Sim(en)ian Jackal/Fox (C.simensis Rüppell), other subspecies of C.aureus such as C.a.bea Heller, C.a.syriacus Hemprich and Ehrenberg and C.a.soudanicus Thomas, and the Pallid or Pale (Sand) Fox (V.pallida Cretschmar).⁶ It has been stated that the wolf (C.lupus L, Common, Grey or Timber Wolf) has never occurred in Africa,⁷ but a subspecies C.l.pallipes, supposed by some to be the ancestor of the domestic dog, has been described from the northern part of the Arabian peninsula, Palestine and Sinai. At the edge of this habitat another subspecies, C.l.arabs, the Arabian Wolf, is found.⁸

Although wild canids appear in ancient Egyptian desert hunting scenes, the names of only two are shown accompanying representations: wnš (Wb I, 324, 16-18: der Wolf (Schackalswolf)) and s3b (Wb III, 420, 5-13: der Schakal). In one scene where both appear together the wnš is larger and a darker ochre in colour than the s3b.⁹

In addition to being depicted as an animal of the desert the wnš is mentioned together with other desert species (the lion, and the bear) in a spell for 'shutting the mouth' of dangerous beasts.¹⁰ Other texts show that it was considered a danger to man, like the crocodile,¹¹ and it was mentioned in what are apparently curses.¹² The wnš was evidently a scavenger, eating fish stranded by a low Nile,¹³ though it is described elsewhere a menace to livestock, entering byres¹⁴ or attacking cattle in the fields.¹⁵ The same was true of the šshb (Wb I, 132, 22: Ausländischer Name einer Wolfs- (oder Hunds-)art), described as a 'red wnš' (wnš dšr) and found in Syria;¹⁶ this text also records the wnš in Syria.¹⁷

From certain references the wnš appears to have been nocturnal, living in caves during the day,¹⁸ and this same shrinking behaviour was noted in the king's enemies¹⁹ or quarry.²⁰ It could evidently be tamed as a pet²¹ and an ostrakon records the sale of a one-year-old pup.²² The skin of the wnš was used to make šš-garments²³ (see also hsdd below).

Wnš is recorded as the name of a constellation (?) in the Coffin Texts,²⁴ and both wnš and the feminine form wnšt (Wb I,325,3 : die Wölfin) were popular as personal names; a form wnšš is also known.²⁵ Wnš was also the name of a canid-headed object (Wb I,325,2).

The s3b is sometimes depicted pulling the solar bark - the animals in this context are sometimes called the souls (b3w) of Nekhen or of the East or West.²⁶ The s3b appears in two texts extolling Rē-Harakhti together with a š3, var. š3 (Wb I,134,20: Art Hunde), which has a determinative in one case very similar to that of the s3b, but in the other shows the short curly tail of a dog.²⁷ These two creatures occur together as animals of the Delta marshes (šdh) in a text at Karnak.²⁸ The very similar term šyš (var. š3y) appears as the name of a jackal-headed deity, once in parallel with two terms recorded by Wb as the names of dogs, bfn (Wb I,456,4-5 : Hunde) and bhn (Wb I,468,20: Art Hunde).²⁹ Writings of the form šyš/š3 occur as epithets of Seth (eg Wb I,33,13 and I,134,20) and it may be that the š3/š3/šyš/š3y designate the 'Seth animal', or at least a real animal of the dog or jackal type with which Seth was closely associated.³⁰ At Beni Hasan this apparently mythological creature has a jackal-like form and is called š3.³¹ In view of the texts mentioned above in which the š3/š3 praises the sun god it is interesting to note the rôle of Seth as protector of Rē in the solar bark, and a representation of the bark pulled by both jackals and Seth animals.³²

The s3b was frequently associated with the king. In the Pyramid Texts parts of his body are described as those of a s3b.³³ In New Kingdom inscriptions his fearsome countenance is compared with that of a s3b³⁴ and his swift progress in conquering foreign lands is likened to this fleet-footed animal.³⁵ The same comparison is made of a horse³⁶, a presumably raging illness,³⁷ gaming pieces in the hand of a skilled player³⁸ and even the wnš.³⁹ Headless s3b appear in a magical text.⁴⁰

In two of the texts comparing the king with the s3b the reference is specifically to a 'southern s3b' (s3b šm); s3b šm also appears as the title of a nomarch.⁴¹ No equivalent 'northern' s3b is attested. The epithet 'southern' is combined with only one other animal name, 3by; the 'southern 3by' is the leopard, the 'northern 3by' is the cheetah. It should be noted that these phrases do not appear until the New Kingdom; before this the leopard and cheetah seem to have been given entirely distinct names (b3 and ntrt respectively). S3b and s3b šm, by contrast, both appear in the Pyramid Texts, particularly in association with the deities Anubis and Wepwawet.

It has been stated that the s3b šm was the Anubis animal, that Wepwawet took the form of a s3b,⁴² and that these animals appeared in the Pyramid texts with respectively recumbent and upright posture.⁴³ Closer examination of the determinatives reveals that the latter is not the case.⁴⁴ In addition two New Kingdom texts describe a s3b šm as 'the opener of the ways' (wp w3wt);⁴⁵ the s3b šm and Wepwawet also appear together on the Shabaka Stone.⁴⁶ Anubis elsewhere appears in parallel with [s3b] wr.⁴⁷

The late Ptolemaic P.Jumilhac, though it mentions Anubis, Wepwawet and the animals associated with them many times, does not help to resolve the problem of distinguishing or identifying the s3b and s3b šm. S3b occurs only once in this papyrus, in a description of the wnš and not as the name of a sacred beast. Instead it is the wnš and tsm (Wb V, 409, 13-22: der Windhund, Hund) which have this distinction.⁴⁸ This is reflected in later texts. In Coptic the ⲟⲩⲱⲛⲩ⁴⁹ is mentioned as being revered at Asyut,⁵⁰ the ancient centre of the cult of Wepwawet. If Asyut is to be identified with Greek Lycopolis⁵¹ it may be deduced that the Greeks saw Wepwawet (and the wnš) as a wolf.⁵² Similarly Anubis at Cynopolis was seen as a dog (tsm). This, however, was not the earlier conception, though one New Kingdom text does associate Anubis and a dog (lw; see below).

It is clear from the Pyramid Texts that in the Old Kingdom it was the s3b and the s3b šm which the Egyptians associated with the deities Anubis and Wepwawet though the distinction between the two types of s3b was not rigid. The wnš had no importance in early religious texts, and it was not until Ptolemaic times that Wepwawet was linked with this animal. In the New Kingdom, and increasingly so afterwards, Anubis began to be associated with the dog (tsm or lw). The relationship between the wnš and the dog seems, at the date of P.Jumilhac, to have

been considered very close. After the Old Kingdom the s3b appears in sacred texts only when pulling the solar bark and the s3b šm not at all. It may be that references to the s3b šm in New Kingdom texts are merely archaisms and that after the Old Kingdom the s3b šm and wnš became confused. This would explain the later association of wnš with Wepwawet.

In the past several authors have identified the s3b as a fox,⁵³ as well as a jackal. Jackals (C.aureus) will bury food and melanistic examples occur,⁵⁴ which may explain the association of the s3b with the corpse-tending Anubis, depicted as a black jackal. S3b may, therefore, denote the Common Jackal. S3b šm and wnš may also designate jackals, possibly two of the subspecies of C.aureus in Egypt today. Indeed wnš has often been translated C.a.lupaster, which accords with the representation of the animal as larger and darker than the s3b at Beni Hasan.

P.Jumilhac is noteworthy for providing a late attestation of a term otherwise recorded only from the Old Kingdom: hsdd. Wb knew only examples from Edfu written hstt (Wb III, 333,5: Art Tier).⁵⁵ In P.Jumilhac the term (written hsdd) appears to comprise both wnš and tsm (the tsm is also mentioned as one of its hprw) and is associated with Anubis and Wepwawet.⁵⁶ Hsdd appears elsewhere as the name of a jackal-headed deity together with s3b, 3yš (see above) and bfn. The hsdd is, therefore, certain to belong to the Canidae, as has been suggested by Montet.⁵⁷

The hsdd of the Old Kingdom appears in clothing lists from various tombs.⁵⁸ It is clear that some of the terms in these lists are the names of animals, and that the clothing was made of these animals' skins. Wnš appears in this context (see above), so it is not surprising to find another of the Canidae in the lists. (M3st, also from these lists, may designate another of the Canidae, possibly a fox; for this word see Ch.13: Miscellaneous Mammals).

Three more words have been considered to name wild canids, but the evidence for all of them is slight.

The knmt (Wb V, 132, 8: ein Tier) occurs in the Pyramid Texts as an enemy of the baboon (ičn).⁵⁹ Sethe⁶⁰ noted the Leopard and Cape Hunting Dog⁶¹ as the greatest predators on baboons. Brehm⁶² noted the mutual animosity of baboons and dogs, and Ember⁶³ therefore compared knmt with

Hebrew and Aramaic and Arabic klb, Assyrian kalbu, 'dog' and Mehri koub 'wolf'. The surviving evidence does not allow a firm translation of knmt as 'dog' or any other animal; see Ch.14: Miscellaneous Mammals for a full discussion of the term.

Wsr (cf wrti, Wb I,363,18 : als Erklärung des Schriftzeichens 𐤨) has been considered the origin of Coptic ⲃⲁⲩⲩⲟⲡ 'fox'.⁶⁴ This proposal was rejected by Černý, Westendorf and Vycichl, all of whom saw the Coptic word as a corruption of Greek $\beta\alpha\sigma\sigma\acute{\alpha}\rho\alpha$, 'fox'.⁶⁵ Nevertheless, the fact remains that 𐤨 shows the head of a canid and wsr may have named a species or type of jackal or fox; and Černý did compare the similar Coptic ⲃⲟⲩⲩⲟⲩ 'a desert animal' (Crum) with Bishārīn ub'ašeḥ 'Sudanese jackal'.

Wb noted the sign w3st (Sign List S40) as the name of a fox-headed deity (Wb I,259,18: als Bezeichnung einer fuchsköpfigen Schutzgottes)⁶⁶ and it is interesting to note that the word appears in parallel with other animal names in a Ptolemaic text from Madāmūd⁶⁷ and as one of the animal forms assumed by a goddess.⁶⁸ Meeks considered the term should be read wsr (see previous paragraph), stating that 'les signes 𐤨 et 𐤨 étant parfois confondus à B[asse] Ep[oque]'.⁶⁹

Wt (not in Wb) was translated 'cub' rather than 'child' by Iversen, as it is sometimes determined with a jackal; he compared the word with wt (Wb I,377,20: alt sein? gross sein?) and wtw (Wb I,377,21: ältester Sohn).⁷⁰ The meaning should doubtless be chosen according to the context.

The most common names for the domestic dog were tsm (Wb V, 409, 13-22: der Windhund, Hund) and iw (Wb I, 48, 3: Art Hund), var. iwlw (Wb I, 50, 1: Art Hund).⁷¹ (For bfu and bhu see above). In one Old Kingdom representation tsm labels hunting dogs of slender build with upright ears and short, tightly curled tails⁷² and dogs of this type depicted on a Middle Kingdom stela⁷³ were also described in a later text as tsm.⁷⁴ A similar dog with rather shorter legs can be seen in certain writings of the personal name p3-iw-Hr.⁷⁵ In the New Kingdom tsmw appears labelling a dog with lop-ears and long straight tail.⁷⁶ The determinative of tsm in the Late Period Geographical Papyrus is, however, a jackal-like animal with a long tail brushing the ground behind it (see above for remarks on Anubis, originally conceived of as a jackal but later as a dog).⁷⁷

Although dogs were depicted frequently, either in hunting or domestic scenes (sometimes under the chairs of their owners)⁷⁸ and were occasionally given pet names,⁷⁹ the label 'dog' occurs only in the few scenes mentioned above. It is not easy to decide, therefore, from the pictorial evidence, whether t_{sm} and ḏw named breeds or types of dog or whether they were alternative terms denoting all domestic dogs in general.

The t_{sm} appears in a text accompanying a hunter;⁸⁰ it was noted for its speed⁸¹ and is recorded being beaten when disobedient (in a proverb).⁸² The ḏw, on the other hand, is mentioned in the house(?)⁸³ and in the street, where they could evidently be a savage nuisance (compare wnṣ in this context)⁸⁴ - one text recounts that an unfaithful wife was thrown to these animals.⁸⁵ Another describes it more kindly as watchful for its master.⁸⁶

Dogs appear to have been regarded as items of livestock - t_{smw} were looked after by m_nḏw 'herdsmen' (the term w_rt t_{smw} also occurs).⁸⁷ M_nḏw are usually found in connection with cattle, goats, sheep, pigs or horses,⁸⁸ and ḏwḏw once occurs in a list with some of these same animals.⁸⁹ Both ḏw and t_{sm} appear in the medical texts, t_{sm} several times (particularly in treatments for the hair and limbs),⁹⁰ but ḏw only once.⁹¹ (No prescriptions for the bites of dogs are known though bites are recorded in other texts.)⁹² The t_{sm} is recorded as having been imported from outside Egypt, though not the ḏw(ḏw).⁹³ ḏw, but not t_{sm}, was popular as a personal name.⁹⁴ ḏw also appears in a veterinary text.⁹⁵ In one magical text a model of a dog (ḏw) is required in a charm to overcome death,⁹⁶ in another the deceased is to be protected by magic from 'dogs and bitches' (ḏwḏw, ḏwḏwt).⁹⁷ In a further magical text the ḏwḏw is addressed as 'chewer of bones'.⁹⁸

The t_{sm} appears in P. Jumilhac as the animal associated with a number of deities, Anubis and Wepwawet,⁹⁹ Anti and Horus,¹⁰⁰ Osiris,¹⁰¹ Horsiese,¹⁰² Seth,¹⁰³ Thoth-Shu,¹⁰⁴ Rē,¹⁰⁵ Geb,¹⁰⁶ and Baba;¹⁰⁷ sometimes the deity involved is not named.¹⁰⁸ ḏw is associated with Thoth¹⁰⁹ and with Baba,¹¹⁰ and Anubis and the ḏw appear together in a Dynasty 19 text in a spell to dispel a headache (gs-m₃ḏ).¹¹¹ The spell includes threats of violence against the sacred animals of certain deities if its words are not heeded: 'I will cause Suchos to sit shrouded in a crocodile-skin. I will cause Anubis to sit shrouded in the skin of a dog'. As earlier texts generally ally Anubis and the s₃b (ṣmḏ) (see above) this may indicate the beginning of the Greek

tradition that Anubis was a dog.

One text associates the iw and t_{sm} very closely¹¹² and iw alternates with t_{sm} in the story of the doomed prince. The dog of the tale is first called iw by the seven Hathors. When a dog is first seen by the Prince it is called t_{sm}, as it is in subsequent sentences, but later in the text is consistently referred to as iw.¹¹³ Both terms are found in other texts where the dog is used as a metaphor of devotion or servility.¹¹⁴

Ember¹¹⁵ compared Hebrew iw 'jackal' with the Egyptian word; a similar term ei meaning 'dog' is found in Somali.¹¹⁶ The onomatopoeic Arabic name wāwī 'dog', representing the animal's howling, has also been likened to iw_iw.¹¹⁷ In Egyptian iw(iw) appears as a verb meaning 'wail, lament',¹¹⁸ and this indicates a similar derivation for the animal name.¹¹⁹ This, and the resemblance of the t_{sm} to the modern Basenji (which does not bark), prompted Handoussa¹²⁰ to distinguish the t_{sm} and iw as follows: 'Ainsi tout autre chien qui aboie fut mis dans la catégorie des iw ou iw_iw : son qu'émet le chien. Le iw ou iw_iw est donc le chien ordinaire, le t_{sm} le chien racé'. However elsewhere¹²¹ the t_{sm} is described as 'barking' (whwh, Wb I, 351, 10: 'bellen') so his distinction is not valid. Blok¹²² supposed that t_{sm} named a particular sub-set of iw; the evidence given above suggests that the terms were largely synonymous, though the older term, t_{sm}, was evidently first applied to hunting dogs.

Whrt is known to Wb only as a personal name¹²³ but in Coptic its descendent ⲟⲩⲓⲟⲡ is the common term for 'dog'.¹²⁴ Vycichl¹²⁵ compared it with north-Moroccan iw_har and Rif uh_har meaning 'fox' : 'Hierzu sei trotz des Bedeutungsunterschiedes ägyptisch w-h-r, "Hund" gestellt, koptisch ⲟⲩⲓⲟⲡ'.

For convenience all domestic dogs are known by the Latin binomen Canis familiaris L,¹²⁶ and both iw and t_{sm} can be translated thus.

The determinatives of mm (Wb II, 58, 15: ein Tier) show a creature with long tail and upright ears.¹²⁷ The original Wb Zettel suggested 'ein einheimisches Tier' and 'Ob Hyäne', adding the further note - with mm_y 'giraffe' in mind - 'also ein Tier, der nach meiner Kopie keine Giraffe ist, wohl aber auch im Habitus an die Giraffe erinnert ...Ob eigentlich irgendein kleineres einheimisches Tier, deren Name dann später auch für das grosse fremde benutzt worden ist?' In view of this

it may be possible to suggest the Spotted Hyaena (Crocota crocuta (Erxleben)), which today is found in Africa south of the Sahara,¹²⁸ as a suitable translation of mm.¹²⁹

The hyaena normally depicted by the ancient Egyptians¹³⁰ was the Striped Hyaena (Hyaena hyaena (L)) which is still present in Egypt. The Egyptian subspecies is H.h.dubbah Meyer, the Nubian Striped Hyaena.¹³¹ The name generally used to describe this animal was htt (Wb III, 203, 16-17: die Hyäne) - attested usually in offering lists or scenes¹³² - though htw, apparently with hyaena determinative, occurs as a toponym.¹³³ Vycichl compared the Egyptian term with Semitic words of similar spelling meaning 'a/to limp'.¹³⁴

Chapter 6 : Elephant, Rhino and Hippo

A very restricted number of terms for these animals appears in ancient Egyptian texts. During the dynastic period until the New Kingdom, when the animals were encountered by the Egyptians during military expeditions or through foreign tribute, representations of elephants were rare and of rhinos non-existent. The disappearance from Egypt and subsequent rediscovery of rhinos and elephants by the Egyptians led similarly to the disappearance of the original designations and the adoption of new terms for the animals. Hippos, on the other hand, were well known throughout Egyptian history, feared chiefly for the considerable danger they caused to boats on the Nile¹ and noted for their noise, destructiveness and aggressiveness.² They were identified with the god Seth and as such appeared as the subject of certain rituals designed to overcome his power.³ Such rituals were depicted particularly in Ptolemaic reliefs, and various terms with obvious etymologies were used of Seth in this form.⁴ Two terms for the female hippo are known only from Ptolemaic texts.⁵

None of these animals now occurs in Egypt, though the hippo (Hippopotamus amphibius L) was still present in the Nile in the 19th century and was mentioned by travellers to the country.⁶ The elephant (African elephant, Loxodonta africana (Blumenbach))⁷ and the rhinoceros (there are two African species: the White⁸ or Grass Rhino (Ceratotherium simum Burchell) and the Black or Browse Rhino (Diceros bicornis L) are now confined, in ever decreasing numbers, to sub-Saharan Africa.⁹

Both elephants and rhinos were depicted in the pre-dynastic rock drawings from eastern and western desert wadis studied by Winkler and Dunbar, though the elephant appeared more frequently than the rhinoceros.¹⁰ No representations of rhinos are known between this date and the New Kingdom, when the animal was recorded as a curiosity, together with its measurements, on a stela at Armant.¹¹ Models of rhino horns were, however, identified from a 1st Dynasty tomb.¹² African elephants, or at least animals resembling these elephants, were drawn until the Middle Kingdom¹³ (and there is one drawing of an Indian elephant from a New Kingdom ostrakon and another in a New Kingdom tomb painting¹⁴) though many representations are found only as the determinatives of the toponym 3bw,¹⁵ Greek Elephantine, modern Aswan. The elephant, or its tusks, almost certainly gave its name to Abu, the

trading post at the first cataract¹⁶ - Váhala supposed that elephants must have survived this far south in Egypt when the town was named¹⁷ - though it is also possible that the animals were named after the town, because of its connections with the ivory trade. The inaccuracy and paucity of the drawings would indicate that the African elephant disappeared from Egypt at an early date¹⁸ and that artists were only imperfectly acquainted with their appearance, in contrast to the hippopotami which were depicted prominently in Old Kingdom scenes of hunting in papyrus marshes¹⁹ as well as in later reliefs. In Meroitic and Ptolemaic times there seems to have been a renewed interest in the animals.²⁰

In the New Kingdom elephants are mentioned in Ny, a state in Syria-Palestine,²¹ and their tusks were imported from Syria, as well as Libya and Kush.²² Although the tusks imported from Kush and Libya were doubtless those of the African elephant, those from Syria were probably not, like the elephant hunted by the pharaoh in Ny, near the Mediterranean coast. That drawn on the Deir el-Medina ostrakon belongs to the Indian species, Elephas maximus L. (the appropriate subspecies has been given as E.m.asurus) which today does not extend even as far as the western border of India. If the elephant of Ny were of the Asiatic and not the African type it would indicate that E.maximus was widely distributed throughout Asia Minor in c. 1482 BC.²³

The only representation of an elephant-like animal specifically called 3bw (Wb I, 7, 15: Elefant) is at Beni Hasan,²⁴ but the creature, which appears among the other fabulous desert inhabitants depicted in this tomb, has only a single horn and no trunk. Brugsch²⁵ deduced therefore that 3bw 'bezeichnet ebensowohl das Rhinoceros als den Elefanten', and that 3bw meant simply 'Hornträger'. Keimer²⁶ compared the Arabic appellation 'Abu karn' (sic ; the term is umm al-qarn) 'possesseur d'une corne' but considered that the Beni Hasan representation 'doit être interprétée comme un rhinocéros fantastique'.²⁷ The problem of identifying the 3bw is further complicated by the appearance of a rhino as the determinative of 3bw on a Middle Kingdom statue²⁸ but Störk,²⁹ who studied the rhinoceros in the Ancient Near East, followed Brugsch in assuming the term to apply to both animals: 'Was liegt näher als der Gedanke, 3b(w) könne außer "Elefant" und dem Ortsnamen "Elephantine"... auch "Rhinozeros" bedeuten?... Den Grund für die Seltenheit, mit der 3b(w) eindeutig das Rhinozeros bezeichnet, darf man wohl darin sehen, daß der Elefant für die ägyptische Kultur immer ungleich interessanter war... Für die

Griechen schließlich war die Bedeutung jb(w) nicht mehr zweifelhaft und so kam es zur Insel "Elefant" und nicht "Rhinozeros".'

The similar single-horned creature in the 'Weltkammer' at Abû Ghurâb was originally believed to have another name, irb3³⁰ (Wb I, 115, 4: ein Tier (Nashorn?)) but Edel, in his discussion of the inscriptions in this temple, read rather ir jbw 'to Elephantine'.³¹ The reading irb3 is, therefore, to be rejected.

Another word with elephant determinative, hw (not in Wb), was recorded by Fairman from the kiosk of Sesostri I at Karnak; he translated 'elephant'. The word, he suggested, was a nisbe derived from hw 'elephant tusk' - 'it is apposite to quote the analogous English use of "tusker" to describe a grown elephant with developed tusks'.³²

The elephant appears, therefore, to have been known by the name jbw into the New Kingdom and the rhino by the same name into the Middle Kingdom. Both appear with different names at later dates. The elephant appears on the Pithom stela³³ with the name dnhr and in demotic texts as tnhr;³⁴ the rhino, hunted by Pharaoh in Nubia and recorded at Armant, as škb.³⁵ On this word Mond and Myers noted: 'The etymology of the word škb is obscure; possibly it was derived from a Nubian place name, or the local name of the beast'.³⁶ Störk considered the etymology of the word extensively, putting forward the semito-hamitic root škk with various derivatives designating pointed objects (eg nail, thorn) as the prototype of Egyptian škb. The -b ending is common to the names of other wild animals; he compared Egyptian db and s3b. He also mentioned a Somali word shabuq meaning 'whip of rhinoceros hide' which may be associated with škb.³⁷

Grdseloff³⁸ considered that škb designated (one of) the African rhino(s) and irb3 (sic) the Asiatic (Indian?) species on the grounds of the latter's similarity with a toponym in Syria-Palestine, im-n-irbt, in a stela dating to the reign of Amenophis II. This point was further discussed by Keimer³⁹ who commented that rhinos had occurred only in pre-historic Syria and that Grdseloff's translation of the toponym 'Lac de Rhinocéros d'Antioche' 'constitue une appellation assez bizarre'. The reading irbt was in any case rejected by Edel⁴⁰ as noted above.

Apart from the names applied to Seth and a Fayum deity in hippopotamus form (hdt)⁴¹ only two terms were used regularly to designate the hippo. The more common of these is db (Wb V, 433, 14-17:

das Nilpferd). H3b (Wb III, 229, 5-6: das Nilpferd) seems to have a more specialized usage, a number of its recorded occurrences being in the Ptolemaic temple texts, though db also occurs in this context.⁴²

In order to draw a distinction between the words it is useful to note that db occurs in the medical texts⁴³ - compare from the Pyramid texts an invocation to an illness in the form of a db⁴⁴ - and in other instances where the animal itself is being referred to⁴⁵ (eg the term used of the animal's skin(?)),⁴⁶ whereas h3b does not. In two texts, the dream book of the Chester Beatty collection⁴⁷ and the Late Period 'Geographical Papyrus',⁴⁸ both terms appear. In the former dreaming of carving a dbt is interpreted as a good omen; h3b appears in the characterisation of Seth-like men. In the latter the determinative of h3b is drawn pinned down with a knife, which indicates its dangerous nature (cf kkk as a determinative of Apophis). This determinative also appears in a text recounting hunting at Mo'allā.⁴⁹ A further reference to h3b occurs on the Middle Kingdom Stela noted above (see 3bw)⁵⁰ where the hippo-hunting ritual is mentioned. Hippo-spearing is also shown in the scene on the fourth square of senet-boards,⁵¹ but the name of the animal is not recorded. A passage from the Coffin Texts mentions the slaying of a db⁵² as does the tale of the Eloquent Peasant.⁵³ H3b also appears in the rituals of the Book of the Opening of the Mouth.⁵⁴ In these texts there seems to be a distinction between the animal as such⁵⁵ and the animal as a hypostasis of Seth; note that in the story of Horus and Seth the latter is recorded as changing himself into a db.⁵⁶

Lacau believed that the name h3bw, meaning 'curved', was derived from the hippos' huge curved teeth.⁵⁷ Störk⁵⁸ compared h3b 'sickle' and similar words h3b/h3b 'krumm, gebeiegt', h3bb/h3bb 'Gekrummtheit, Falschheit', making the name of the animal 'das Heimtückische'. From the writing of h3b with 'tusk' in the Pyramid Texts and with 'horn' (Sign List F18 and F16) in P.Boulaq VI the term would indeed seem to be associated with (some characteristic of) teeth or horns so the above translations appear appropriate.


H3b has also been associated with the phrase bhs h3bw which occurs in the Pyramid Texts⁵⁹ and was interpreted as 'calf (ie young) hippopotamus' though Wb (III, 229, 15) recorded it separately from h3b, 'hippo', and did not offer any translation. The same phrase is also found in a medical papyrus,⁶⁰ two Middle Kingdom texts from burial chambers,⁶¹ the Coffin texts⁶² and a Late Period text.⁶³ Although bhs

is known as a term describing the young of animals other than cattle (eg bhs n m3hd), h3bw here should probably be understood differently; Sethe⁶⁴ translated the Pyramid Text example 'zahnlos Kalbchen' and Breasted⁶⁰ the medical example 'hungry calf'. There is perhaps confusion here with s3bw 'variegated'; a similar phrase, ih h3bw, occurs in P.Boulaq VI. (See Ch.4: Cattle).⁶⁵

Db has been equated with Semitic words for 'pig'. Ember⁶⁶ compared Assyrian dabu 'pig' and modern Arabic khanzi-al-mā 'hippo' lit. 'water-pig', and noted that an Egyptian deity with the head and body of a hippopotamus (Tuēris) was sometimes described as rrt 'pig'. (See Ch.11: Pigs).

Chapter 7 : Goats

The term wt displays a number of determinatives, most frequently a goat or a sheep. Although wt appears to denote primarily a class of animals (most closely conveyed by English 'mammal') goats and sheep may have been considered typical of the group '[true] wt' in the same way as the gazelle, and less frequently the oryx and ibex, seem typical of 'desert wt' (wt h3st). In one text¹ goats and sheep appear as defined sub-groups of wt - 'small wt' (wt ndst with goat determinative) and 'white wt' (wt hdt with sheep determinative). (For further discussion of the term wt, see Chapter 1: Classification).

The most commonly occurring word with goat determinative is nh,² divided by Wb into nh (Wb I, 205, 11-12 - pre Dynasty 18 spelling) and nhw (Wb I, 205, 13-14 - post Dynasty 18). The latter Wb translated 'Ziegenbock?'³ and the former 'Ziege? oder allgemeines Wort für Kleinvieh?'. The last suggestion was taken up by Helck⁴ and Janssen,⁵ both of whom proposed that nh was a general term comprising both goats and sheep.⁶ However, from the numerous instances of nh used in parallel with other terms for domestic animals, including sheep,⁷ it becomes apparent that nh denoted a single discrete species, though 'various (types)' (sb) were evidently distinguished.⁸ This interpretation is further supported by the consistent use of a single determinative with nh (Sign List F27 or ) rather than several (as was the case with wt).

nh s'b ('castrated goat') occurs twice⁹ and nh should thus perhaps be translated '[male] goat'. However, the 'male' (t3y) is specifically named on one ostrakon.¹⁰

That goats were desirable possessions is shown from the frequent mention of the animals, sometimes with their prices, or of goats' skins,¹¹ both in private records¹² and in lists of booty from foreign lands.¹³ Goats also appear in the medical texts¹⁴ and as sacrificial beasts¹⁵ though they are elsewhere recorded as unclean.¹⁶ Goat-herds are occasionally mentioned,¹⁷ and those holding this title may at some time have held military responsibilities.¹⁸

Ib (Wb I, 61, 7: Böckchen) occurs once over a representation of a group of hornless and apparently young goats,¹⁹ and several other times, more or less damaged, in the tomb of Rekhmirē.²⁰ This would seem to support Wb's translation. In one text, however, nh and ib, though

they occur together, are not in the order which would be expected if ib were the younger animal.²¹ (Nevertheless, in another text²² ib does follow nh.) ib and their young (ndst) appear in a list of cattle and other animals to be provided for a temple.²³ Their position in the list is where goats would be expected, so the primary meaning of ib here is unlikely to have been 'kid' or similar;²⁴ Lesko recently gave both 'kid' and 'goat' as a translation.²⁵ Like nh, ib appears in the medical texts,²⁶ and as a beast for sacrifice, perhaps to be identified with Seth²⁷ (cf r below).

In a hymn to the Nile ib stands in parallel with 'men' as being provided for by Re's creation, and thus appears to designate animals as a class (cf perhaps wt as the class 'animal' but also 'goat').²⁸ Posener translated 'le (bétail) assoiffé',²⁹ but although the translation (cf ib 'thirsty') is appropriate here - the noise (hrw) of a herd (idr) is compared with ib around a well (šdyt) - this sense of ib with goat determinative is not apposite in other contexts.

Pastures for white ib (ib hd) are mentioned in P.Wilbour.³⁰ Gardiner translated 'white goats' but Helck, though at first translating likewise 'Weiße Ziegen',³¹ later preferred to understand as 'sheep' on the grounds of comparison with the phrase wt hdt apparently with that meaning (see above).³² The phrase ib hd was also noted by Gardiner in a toponym.³³

A papyrus recording a collection of magical texts mentions hnw ib(w) which is translated by Koenig as 'peau de chevreau'.³⁴ (for the skins of the nh see above). Pj ib also occurs as a personal name.³⁵

Three more terms with goat determinative were known to Wb: r (Wb I, 208, 10: Ziege); w'ty (Wb I, 279, 7-8: die Ziege) and wndw (Wb I, 326, 3: Art Ziege), of which r is the most common.

Like ib, r occurs in offering texts parallel to the Nile goose, smn,³⁶ and in an offering list at Medinet Habu.³⁷ (A writing t in a livestock list³⁸ may be an error for this word). In both the latter cases the words for certain other animals in the list are rare terms - iph in the former (see Ch.11 : Pigs) and šw in the latter (see Ch.8 : Horse and Donkey). Despite examples of r showing a trussed goat as determinative³⁹ (cf the trussed [cow] in hryt, a term applied to sacrificial cattle - see Ch.4 : Cattle) the term was not used

exclusively of beasts of sacrifice as it is attested in the medical texts⁴⁰ (ḥph and hryt do not appear in this context).

The phrase k3 (n) ḥr, which appears in two papyri⁴¹ appears to designate specifically a 'male' ḥr (for k3 used of male animals see Ch.4 : Cattle). This would indicate that ḥr applied to both male and female animals,⁴² though a possible female form ḥrtt is also attested as the name of a goddess.⁴³ ḥr also occurs as a toponym.⁴⁴

ḥr is elsewhere recorded as the form taken by a deity,⁴⁵ and may, therefore be compared with a late (Ptolemaic) term ḥrḥr designating the animal of Banebbed, god of Mendes (for this term see also ḥmḥm, Ch.13: Miscellaneous Mammals).⁴⁶ This animal was named τράχος 'he-goat'⁴⁷ by classical authors, and it is evident that even by New Kingdom times representations of Banebbed, originally a ram, had acquired various goat-like attributes. Note here various Coptic words derived from b3 (the ram of religious representations) which mean 'goat'. (See further in Ch.12 : Sheep).

As there are no representations of the ḥr, and the word does not occur in any text together with ḥnh, it is difficult to see in what way or to what extent the ḥr was differentiated from the ḥnh. That it was in some way similar to the ḥb is obvious from the texts where they appear to be interchangeable; that ḥb designates a type of goat rather than merely 'kids' is also evident.

Wḥty is attested in the medical texts, where it is the most common of the four terms discussed above.⁴⁸ Elsewhere it appears independently⁴⁹ or contrasted with types of cattle,⁵⁰ which is of little help in determining its precise meaning. Osing supposed it to be related to a word ḥw (not in Wb) 'einzelnes Stück (Vieh)'.⁵¹

Wndw likewise appears independently⁵² or together with terms for cattle (especially ḥw3).⁵³ Wndw goats are depicted in various Old Kingdom tomb scenes; some show long widely everted wavy horns,⁵⁴ some are hornless animals⁵⁵ and others have short horns like those of the ḥnhw.⁵⁶ Janssen is wrong, therefore, to state that wndw applies to 'artificially dehorned animals'.⁵⁷ The term does not survive beyond the Old Kingdom, but it is interesting to note that following its disappearance a term for cattle with the same spelling becomes evident. This term too is closely associated with ḥw3 (see Ch.4: Cattle). Whether wndw was adopted as a cattle term as ḥnh became more commonly

used for 'goat' (ḥnh is rare in Old Kingdom inscriptions), it is not possible to say.

Roquet translated wndw 'chèvre mambrine',⁵⁸ presumably for the Palestinian variety of the domestic goat or Mamber (Capra hircus mambrica).⁵⁹ Zeuner believed the ancient Egyptian goats to have been of a type possibly related to the Wild Goat, C.aegagrus Erxleben, and not the modern Mamber.⁶⁰ (On the wild goat, possibly called ḥmjt, see Ch.2: Antelopes and Similar Animals).

Wš33w (Wb I, 369, 8: Masttiere), though generally having a [cow] determinative, is also applied to goats (not as Wb 'von Antilopen u. Gazellen' - only goats are to be seen in the register accompanied by the inscription in question).⁶¹

Shisha-Halevy also recorded a loan-word, ḥtm (not in Wb), with the meaning 'goat'.⁶²

Chapter 8 : Horse and donkey

Horses (Equus caballus L) appeared in Egypt during the Second Intermediate Period,¹ acquired - to judge from the Semitic loan-words adopted to describe horses and chariots² and later imports of horses from Syria Palestine³ - from Asiatic immigrants who settled in and usurped the throne of Egypt.⁴ The Egyptians seem to have seen horses first in pairs since they gave to them the name htr⁵ (the verb root meaning 'tie'),⁶ which had previously been applied to yokes of oxen.⁷ A second name for the horse was derived from the plural form of the Semitic term - ssmt⁸ from susim 'horses'.⁹ In Egyptian representations horses are almost exclusively seen in pairs harnessed to chariots; single horses with riders are very rarely depicted.¹⁰ Horses were always closely associated with the military¹¹ and never used for ploughing or transport as were donkeys and oxen which would indicate that they were first encountered in battle. However, the Pharaoh used them for recreation, especially for hunting.¹²

Wb recorded htr (Wb III, 199, 11-200, 12: Pferdegespann, Pferde) and ssmt (Wb IV, 276, 18-277, 7: das Pferd) with different translations but Donner¹³ believed that both words were adopted with the meaning 'team of horses' and that both were subsequently used for the single animal¹⁴ (cf Coptic ⲗⲓⲟ 'horse').¹⁵ The resulting redundancy of one of the terms would explain why only one survived into Coptic. Htr occurs in the texts more frequently than ssmt and was incorporated into more standard phrases (hr htr¹⁶; htr ⲓ (tpy n hm.f)¹⁷; ti nt htr¹⁸ - compare the less common r/hr h3t ssmt of Ramesside texts¹⁹) which no doubt favoured its survival over that of the loan-word.²⁰ (Note that writings without phonetic complements are not considered here).

In certain texts both htr and ssmt are mentioned in connection with chariots (mrkbt, wrrt),²¹ or as 'yoked' (nhb), like oxen.²² Since no representations are known of a lone horse pulling a chariot, both terms would seem to designate a pair of horses. This also appears to be the case in a Dynasty 18 stela, where numbers of htr and ssmt equal the numbers of chariots mentioned.²³ In a Dynasty 19 text, however, the number of htr mentioned is twice that of the number of chariots.²⁴ Htr here apparently means a single horse²⁵ and since in a text of similar date at Medinet Habu htr and ssmt are used of the same horses (compare other Ramesside texts giving ssmt and htr as variants in different versions of the same text)²⁶ this would probably be true of ssmt also. This meaning is confirmed by the fact that subsequently a new term rks

(Wb II, 459, 7: Gespann (von Pferden)) was used in conjunction with htr to express 'a team of horses',²⁷ as did the phrase ꜥ n htr (Wb III, 200, 5: Gespann).²⁸ Htr and ssmt seem from other texts to have been equivalent terms,²⁹ though htr has also been translated 'riding'.³⁰ In the Rosetta Stone demotic htr translates hieroglyphic ssmt.³¹

Drawing a precise temporal dividing line between the uses of ssmt and htr as '(team of) horses' and as '(single) horse' is more difficult. In some Dynasty 18 texts the words seem to be used of individual 'horses', not merely 'teams of horses',³² and in one case ssmt may designate a single horse.³³ In certain later texts, however, the words still appear to have the meaning 'team', rather than 'horse'.³⁴ Thus it is possible to conclude merely that the words might have either meaning in earlier (Dynasty 18-19) texts and should be translated according to context.

Camino believed that htr was a broad term, comprising both horses (ssmt) and chariots (wrrt).³⁵ Several points militate against this. The text he was studying seems to place in clear parallel the words ssmt and htr, and the term for chariots, wryt and ꜥqns.³⁶ The appearance of htr together with wrrt (where horse(s) and chariot seem to be contrasted) is well attested (see above). A number of texts mention food for htr, which must therefore denote horses alone,³⁷ and htr is listed in parallel with other animal names as if it were no more than a simple species designation.³⁸

Horses appear to have been noted for their valiance,³⁹ eager speed⁴⁰ and impatient tramping,⁴¹ and on the battlefield the king's horses⁴² were compared to a falcon scattering small birds.⁴³ An army compared to a horse (htr) was thus presumably eager to throw itself into battle.⁴⁴ Horses were kept in stables⁴⁵ or let loose⁴⁶ in the fields.⁴⁷ They were looked after by overseers (ꜥmy-r ssmt)⁴⁸ or herdsmen (mnꜥw htr).⁴⁹

A few more words for horses are known and P. Anastasi IV lists a number of these - gꜥwꜥ, nfrw, msw, ꜥbr and hmt in addition to htr.⁵⁰ Hmt is a designation for any female (human, mammal or bird) and is applied to horses in the Piankhi Stela⁵¹ (for further discussion see Ch.4: Cattle). The preceding term ꜥbr (Wb I, 63, 15: Hengst) may be compared with Semitic abyr 'mighty, valiant'.⁵² It is also known in a tribute list from Dynasty 18 in the sequence ssmt, msyt nt ssmt, ꜥbr,

rnp.⁵³ msw and msyt are obviously connected with ms 'be born'; ms is used primarily of cattle, but also of other newborn creatures. glw3 (Wb V, 159, 9: Art Pferde) is attested in two other texts. In one it is mentioned in a stable (m p3 ihy),⁵⁴ in the other it designates the animals from which ssmt are chosen.⁵⁵

Nfrw (Wb II, 261, 15-16: allgemein Pferde, auch bes. die Fohlen) appear elsewhere parallel to ssmt⁵⁶ (written smsm) and as a variant of htri⁵⁷ and in the title s3 hrp nfrw.⁵⁸ Nfrw is also a term applied to cattle. The same is true of rnp from the Dynasty 18 tribute list (other attestations recorded by Wb are limited to epithets of Montu in the Ptolemaic Period; another reference noted in Wb was restored htri by Sethe).⁵⁹

It is tempting to see in the Anastasi text a parallel with the Medinet Habu cattle list (see Ch.4: Cattle) which appears to order the animals from most to least mature. Htr would thus be the most adult and ms the most juvenile. A comparison may also be made between glw3 and the gw which appears as a cattle term, apparently as a variant of ng.⁶⁰

The ancient Egyptian name for the donkey Equus asinus L,⁶¹ 3 var. 3w⁶² (Wb I, 165, 6-11: Esel) with its feminine counterpart 3t, var. 3t⁶³ (Wb I, 165, 12: Eselin), Coptic Elw,⁶⁴ is undoubtedly onomatopoeic.⁶⁵ (Note that female donkeys were also called hmt.)⁶⁶ This type of word was found in other semitic languages to describe horses - Ember⁶⁷ compared Assyrian urû 'horse' and Hebrew ayir but 3 is not necessarily related to these.⁶⁸ In addition to occurrences of the word with donkey determinative,⁶⁹ the meaning of the term is proven by its appearance over pictures of the animal.⁷⁰

Donkey herds were termed sh3t⁷¹ (Wb IV, 209, 9: Herde von Eseln die Lasten tragen u.ä) and donkey foals skt⁷² (Wb IV, 315, 12: Eselsfüllen), Coptic CH6.⁷³ skt is often found in the phrase 'a she-donkey with her foal',⁷⁴ though also independently.⁷⁵

Donkeys are frequently mentioned in the company of other domesticated animals⁷⁶ and are often represented in agricultural scenes.⁷⁷ They were used for ploughing⁷⁸ and threshing,⁷⁹ and as the principal beast of burden.⁸⁰ The riding of donkeys is not depicted, and only foreigners or a sick man are mentioned as riding them.⁸¹ They pulled chariots (mrkbt⁸², wrryt),⁸³ and a carrying-chair is shown supported by donkeys.⁸⁴ Their hide was utilised for water-skins,⁸⁵ and

sieves were made of their hair.⁸⁶ Many of their parts appear in the medical texts.⁸⁷

The donkey was patently a most useful beast and this accounts for the vast number of references to donkeys on ostraca. These record transactions of sale⁸⁸ and loan⁸⁹ and the return of the animals to their owners.⁹⁰ Others preserve cases of litigation arising from these transactions⁹¹ or the death of the donkey while out of its owner's possession.⁹² In one case the donkey was found to be pregnant.⁹³ Large numbers were in possession of the state⁹⁴ and the temples⁹⁵ as well as private individuals.

Despite their usefulness they were not so valuable as cattle; even young cattle fetched the same price as a donkey.⁹⁶ In livestock lists donkeys ranked after cattle and sometimes even after the cheaper goat.⁹⁷ Nevertheless they were regarded as a symbol of wealth⁹⁸ and are mentioned among the tribute of foreign lands.⁹⁹

In literature donkeys came to represent stubbornness, ill-temper and stupidity.¹⁰⁰ 'Donkey' was a term of abuse¹⁰¹ and occurred in a favoured obscenity.¹⁰² Donkeys had a rôle in magic¹⁰³ and in religion. This was most notably through their association with Seth¹⁰⁴ (see also hy, h_iw below) though they are also mentioned in the Book of the Dead,¹⁰⁵ and various demons in the underworld had donkey heads.¹⁰⁶ A donkey might constitute a good omen in a dream.¹⁰⁷

Wild donkeys as well as domesticated forms were known to the Egyptians. They are shown infrequently in hunting scenes¹⁰⁸ and it is likely that the ʿ3 h_mw (Wb IV, 470, 5: wilder Esel) of a Dynasty 18 stela recording the Pharaoh's hunting exploits in Syria-Palestine refer to such animals.¹⁰⁹

Three other words appear to have the meaning 'donkey, ass'. The first, šw (Wb (IV, 4, 3, 16: Esel), occurs only once in a list of domestic animals in a tomb at El-Kab,¹¹⁰ and may simply be an erroneous writing of ʿ3. It should be noted that the preceding word, determined with a goat, written ʿt (possibly for ʿr) is not the most usual term for this animal (see Ch.7: Goats) so the reading šw 'donkey' cannot be ruled out. Further support for the reading šw was recognised by Junker,¹¹¹ who noted the head of a donkey in a writing of a word associated with the handling of cloth, šwšw (Wb IV, 75, 16: zusammenballen oä; Wb IV, 75, 17: Bausch, kleiner Ballen o.ä. von

Leinen (zum Auswischen einer Wunde, als Polster)).

The second word, ḫmr (not in Wb), appears to be a loan from Semitic, being written in the 'syllabic orthography'. It occurs in the phrase 'you drive your subordinates like ḫmrw',¹¹² which was compared by Ward¹¹³ with the very similar sentence from P. Chester Beatty V: 'He (the soldier) is driven like a donkey'.¹¹⁴ Ward noted a number of similar Semitic words: Ugaritic ḫmr, Hebrew ḥamōr, Arabic ḥimār and Akkadian ḫimēru meaning 'donkey' and Ugaritic ḫmr and Akkadian ḫimmeru meaning sheep. He concluded that Egyptian ḫmr, meaning 'donkey' was borrowed via Akkadian; this language was known by scribes of the Amarna period and it was then, presumably, that the term was adopted into Egyptian.

Hy (Wb II, 483, 15-17: als Bez. des Seth) occurs together with the bfu at Philae, among things which may not be brought into the temple.¹¹⁵ Bfu is attested elsewhere as a term for dog (see Ch.5: Dogs and Similar Animals) so hy was presumably denoted a real animal. It has a determinative in the form of a recumbent donkey pinned down by a knife to render it harmless.

Hlw (Wb II, 484, 2: Substantiv (wohl ein böses Tier)), written with the determinative of a donkey in the Coffin Texts,¹¹⁶ is often attested as a name for Seth.¹¹⁷ It was compared by Ward¹¹⁸ with various other Egyptian words - hwt 'to shout', hhy 'to ring in the ears (noise)', hhty 'tinnitus', hwhy 'to become hoarse from shouting' and demotic hwhw 'to bray (ass)'. In one case Hlw (=Seth) appears in parallel with the name Ṣd-ḫrw, rendered by Ward: 'one who repeats a noise aloud',¹¹⁹ and may thus be supposed, especially in view of the words noted above, to have a similar meaning. In two Coffin Text passages the voice (ḫrw) of the hlw is mentioned,¹²⁰ which would also support this interpretation. Prior to the Coffin Texts hlw appears in the Pyramid Texts (ḫ'3t hlwt - Ward translated 'a braying jenny');¹²¹ in a variant text the word is determined by a pair of ass's ears.¹²²

Hlw may thus be interpreted 'brayer', a somewhat different appellation from the zoological term ḫ 'ass' (cf zoological ḫn and descriptive htt - see Ch.10: Monkeys). This would explain the use of the donkey's head to write hrw 'day',¹²³ a practice also discussed by Ward. He postulated the existence of a late Egyptian word hw (related to Demotic hwhw) meaning 'ass', from which the writing of hrw (then pronounced hw) was derived.¹²⁴

The final word to be considered here is ptr, a hapax from an ostrakon listing the herdsmen of various types of animal - cattle, goats, sheep, pigs, donkeys and ptr.¹²⁵ From its writing it seems to be a Semitic loan-word; because of this and its closeness in the list to donkeys Kitchen¹²⁶ likened it to Hebrew pered, f. pardā 'mule' (a mule is a sterile horse-donkey cross).¹²⁷ Prd also occurs in Ugaritic accounts of a date similar to that of the Egyptian ostrakon.¹²⁸ Bohairic TEMΘAM (derived possibly from Akkadian da(m)dammu) has also been considered to designate the mule,¹²⁹ but this term is not (yet) known from an earlier period.

Chapter 9 : Lions and Other Cats

In his listing of the animals of Egypt Flower¹ noted, from the cat family, the Cheetah (Acinonyx jubatus Schreber),² the Caracal (also known as the 'Desert Lynx' or 'Caracal Lynx') (Felis caracal Schreber)³ and the Leopard (Felis (Panthera) pardus L).⁴ Whether any of these remain in Egypt is questionable.⁵ Flower also mentioned three species of wild cat as inhabitants of Egypt - the Libyan or African Wild Cat (F.libyca Forster, now considered to be a sub-species F.sylvestris libyca⁶), the Jungle Cat (F.chaus Guldenstaedt;⁷ the subspecies F.c.nilotica De Winton, the Egyptian Jungle Cat, was given by Hoogstraal⁸) and the Sand or General Marguerite's Cat (F.margarita Loche⁹) - in addition to the domestic variety (F.catus L)¹⁰

Kingdon supposed that it was the African Wild Cat (F.libyca / F.s.libyca) which was domesticated by the ancient Egyptians and that this too, via export, may have been the ancestor of European domestic cats.¹¹ Morrison-Scott noted the similarity between cats mummified by the ancient Egyptians and F.libyca Forster, and, like Kingdon, presumed that the Egyptians' domestic cat was derived from this species. The Egyptians' cat he recorded as F.l.bubastis Ehrenberg.¹² The species F.chaus has also been identified from mummified remains, though it may not have been domesticated.¹³

A number of other species should also be taken into consideration. From representations and texts it is apparent that the Lion (F.(P.)leo L) occurred in ancient Egypt; its worldwide distribution has contracted greatly even since the last century.¹⁴ The Serval (Cat) (F.serval Schreber) and the Golden Cat (F.aurata Temminck) of East Africa may also have occurred in Egypt in the past.¹⁵ The Serval is now confined to Africa south of the Sahara, but, like the Zorilla (Ictonyx striatus Perry), the range of which is similarly restricted today but which has been identified from Old Kingdom representations (see gsfnw), it may have originally extended farther north.¹⁶

The meaning of m3i (Wb II, 11, 14-19: der Löwe), female m3it (Wb II, 12, 6: die Löwin), is clear from its lion determinative (Sign List E22)¹⁷ and is confirmed by the occurrence of the name together with pictures of the animal.¹⁸ The term may be complemented by hs3 (Wb III, 161, 1-10: grimmig, wild) which Wb recorded as 'Bez[eichnung] des Löwen' (Wb II, 12, 2; m3it hs3t : Wb II, 12, 7: die Löwen). There appears to have been in Egyptian a similar term m3 meaning 'animal'

(see Ch.1: Classification). Loret¹⁹ believed m3 and m3i in all cases meant simply 'animal' and that juxtaposed terms then differentiated between types of animal. M3 hs3 he thus translated 'fauve terrifiant' and m3 hḏ (oryx) 'fauve blanche du désert'. Texts in which both m3 and m3i appear would, however, indicate that a clear distinction was made between the terms, though where the word appears alone, especially in the phrase 'm3(i/y) of the desert' it can be difficult to decide which is meant.²⁰ De Wit assumed that m3i hs3 had no greater significance than 'lion'.²¹

Wb recorded the feminine forms m3it and m3it hs3t only as designations of goddesses,²² and not as applying to the lioness as an animal. This may be accidental, since Coptic preserves the obviously related term MOYH²³ (with variants, MIH, MIÉ, MYH CD 160b: 'lioness' under the entry MOY 'lion') with this meaning.²⁴ There existed in Egyptian another word translated 'lioness', rby²⁵. The term, together with demotic lby (DG, p.262: 'der Bär... Auch für Löwe') and Coptic λβοι, has been compared with semitic lby 'lion', and is also similar to Arabic labwah 'lioness'.²⁶ It may also have been related to rw (Wb II, 403, 8: der Löwe), which appears to have been an old term for the lion, or to rw-3bw (Wb II, 403, 9: Über dem Bilde eines Löwen).²⁷ The figure of a lion was used to represent phonetic r(w) (Sign List E23). It was distinguished from m3i (Sign List E22) by its recumbent posture - though m3i does on occasion appear to be written with a recumbent lion,²⁸ no full phonetic writings of m3i occur with recumbent lion determinative.

As noted by Wb, rw-3bw was originally used of the figure of a lion, and the phrase has been taken as an epithet of a deity, 'lion tacheté'.²⁹ (Cf on 3by below.) Rw is seldom attested elsewhere,³⁰ usually appearing only as rwty, the 'lion-pair' (Wb II, 403, 10-11: das Löwenpaar),³¹ also translated: 'celui à l'aspect léonin'.³²

That rby means 'lioness' seems (from the context in which it occurs) inescapable, but it should be noted that the use of entirely different terms for male and female of a particular species is very uncommon in Egyptian and suggestions to the contrary can usually be disproved (see hbn, im3t, kyky). The pintail (A.acuta) does seem to constitute an exception, since both hp and st appear to designate the bird, hp the drake and st the duck, though st is by far the more common term and was applied to the males as well as the females (see Ch.15: Waterbirds).

Wb also recorded another possible loan from Semitic designating the lion: l3r (Wb I, 106, 4: ob לִיָּר Löwe?).³³ Unfortunately, the word occurs only once in a rather obscure context; whether it is to be translated 'lion', or, as others have done, 'sheep' or 'lamb',³⁴ must remain open to question.

A number of other terms in Wb are recorded as designating lions, for example w'ty, phyt, hmhmty, knw, t3m, T3m, t3rw, smnt and hwnt with lion determinatives appear as epithets of deities. These words are attested only from Ptolemaic texts, and are, therefore, not discussed here.³⁵

The lion (m3i) appears a number of times in the medical texts³⁶ and was mentioned as being hunted³⁷ and tamed³⁸ - it might also accompany the king into battle.³⁹ On certain days of the year lion's meat was forbidden⁴⁰ (which would suggest that it was sometimes eaten and that lions were not merely hunted for sport) and a dire destiny was predicted for lions which ventured abroad on other fateful days.⁴¹ The lion was feared⁴², both by man and other beasts,⁴³; it appears in a proverb as jealous of its property, not to be crossed,⁴⁴ and as an ill tempered beast.⁴⁵ It was, with the frog, a symbol of resurrection⁴⁶ and watchfulness⁴⁷ and in the Book of the Dead the deceased was identified as a lion,⁴⁸ perhaps for those reasons. M3i was also applied to figures of lions (cf Wb II, 12, 1: Löwengestaltiges Bild des Königs, sog. Sphinx)⁴⁹ and was used as a personal name.⁵⁰

By far the greater part of references to m3i and m3i hs3 take the form of similes. Gods,⁵¹ kings⁵² and ordinary mortals⁵³ were described as, or having the attributes of, this noble beast (note that some examples may be read rw). Amenophis III was particularly closely associated with the lion and a lion sometimes appears in the cartouche of his prenomen with the reading nb.⁵⁴ Lions are depicted on scarabs together with kings' names and kings' names appear on statues of lions.⁵⁵ Lion heads and legs were integral parts of the decoration of the royal throne⁵⁶ and the king's residence was described as a lion.⁵⁷

Certain of the names attributable to the other big cats are found in Old Kingdom clothing lists and similar contexts: b3 (more often b3 šm') (Wb I, 415, 4-6: Panther; cf 7-11: Leopardenfell), ntrrt and ib (for inb) (not in Wb).⁵⁸ These terms have been identified as naming the leopard (Felis (Panthera) pardus),⁵⁹ the cheetah (Acinonyx jubatus) and the caracal (F. caracal) respectively. All appear named in Old Kingdom

tomb scenes, the latter in the Giza mastaba of 'Issi-mr-ntr,⁶⁰ b3 and ntrt in the mortuary temple of Niuserrē.⁶¹

At a later date the leopard and cheetah seem to have been regarded as 'northern' and 'southern' varieties of the same animal,⁶² written 3by (Wb I, 7, 11-14: Panther), determined occasionally with an animal with bowed head.⁶³ This hieroglyph appears once as the name of an item of clothing,⁶⁴ and therefore presumably replaced the older sign from the clothing lists and Niuserrē's scene (Sign List F9). A big cat with bowed head is called 3by šm in the temple of Hatshepsut at Deir el-Bahri.⁶⁵ By contrast the pair of creatures depicted below it called 3by mh are more slender, with longer legs, and hold their heads up (unlike the 3by šm they wear collars). In this they resemble old representations of the ntrt, and are therefore to be identified as cheetahs.

3by alone could apparently also be used for cheetah⁶⁶; the facial markings of cheetahs (dark lines running from the eyes down the cheeks) which appear on the 3by mh mentioned above are also found on skins marked simply inm 3by (same scene).⁶⁷

The skins of these animals were mentioned among tribute from foreign lands,⁶⁸ and as a traded commodity.⁶⁹ They were worn by sm-priests⁷⁰ (a reason for this is offered in P.Jumilhac⁷¹), other priests,⁷² Seshat,⁷³ and the deified Hatshepsut.⁷⁴ The skin of an 3by is also attested in the 'Song of the Harper',⁷⁵ and in the medical texts, as is its dung;⁷⁶ their claws are mentioned in the Book of the Dead.⁷⁷

From the Old Kingdom and Middle Kingdom representations mentioned above it may be assumed that the leopard and cheetah were indigenous to Egypt at those dates. The New Kingdom representations from Thebes show the animals among tribute from Nubia, as also seems to be the case in P.Ch.B. IV.⁷⁸ A New Kingdom text also mentions 3by in Syria-Palestine.⁷⁹ This might indicate that their numbers were on the decline in Egypt; however, the 3by often appears in the imagery of New Kingdom texts, particularly when describing the king in battle⁸⁰ or those about to wreak vengeance on their adversaries,⁸¹ so they were clearly not lost from the Egyptians' minds. They may also have been hunted in Egypt at that date⁸² and to dream of them was considered a good omen.⁸³

An etymology for 3by was offered by Müller⁸⁴ who translated the word literally as 'das bunte Tier' (he compared 3bt 'buntes Zeichen, Mal', 3b 'bunt', not in Wb). Edel rendered the name of the cheetah, ntrt,⁸⁵ as 'Göttin' or 'die Göttliche'; this was followed by Westendorf.⁸⁶

Another term for a member of the cat family is partially preserved in the temple of Niuserre;⁸⁷ all that remains of the name is ...3 with recumbent lion determinative, possibly to be read rw. The animal's head is lost, but it has a big-cat-like body. Its shortish tail indicates that it could be the Serval (cat) (Felis serval Schreber). (See above on this animal).

Wst and wst, both of which appear in the Coffin Texts,⁸⁸ the former with Sw determinative, the latter determined by Sw, were translated 'un félin' by Meeks. Since the words are not attested elsewhere this must remain a suggestion.

Miw (Wb II, 42, 1-3: der Kater), fem. myt (Wb II, 42, 4-7 : die Katze), Coptic εμοϣ,⁸⁹ was the unmistakably onomatopoeic name for the cat.⁹⁰ Störk wondered whether miw did not embrace the Serval and Jungle Cat as well as the domesticated cat,⁹¹ but a possible term for the Serval has been suggested above. That a man could be described as 'smaller than a cat and bigger than a guenon',⁹² indicates (unless this is a mistake) that domestic cats could be quite large, as might be expected if they were derived from F.sylvestris.⁹³

Cats appear in some texts in conjunction with mice,⁹⁴ and also seem to have been considered an enemy of snakes.⁹⁵ In this guise the cat was identified with Rē' as he battled with Apophis,⁹⁶ and is sometimes mentioned among the familiars of Seth.⁹⁷ Harakhti was addressed as 'the cat',⁹⁸ and 'she-cat' was applied to Hathor⁹⁹ and other divinities.¹⁰⁰ Cats replaced lions as the animal sacred to Bastet and were particularly revered in the Late Period.¹⁰¹ The cat is also mentioned in a dream-interpretation text,¹⁰² in a mythological text¹⁰³ and a magical text; in the latter the prescribed inscription on papyrus is to be hung around its neck.¹⁰⁴ A spell for the enchantment of a cat is recorded in the Metternich Stela, though the lion determinative of the word may explain it as an error for m3i.¹⁰⁵ The wailing (rmw) of a cat is mentioned in a further text.¹⁰⁶

Although no representations of cats are known from the Old Kingdom¹⁰⁷ the personal names p3 my and myt are attested at that date and continued to appear into the Late Period.¹⁰⁸

Despite the frequent appearance of the parts of the cat (both male and female) in the medical texts,¹⁰⁹ their possible use as a hunting animal or as a retriever during fowling expeditions¹¹⁰ and their occurrence as pets¹¹¹ they do not seem to have been greatly prized. They are only once mentioned in tribute lists,¹¹² less frequently than are dogs, and even guenons, which seem to have had merely decorative appeal.

Chapter 10 : Monkeys

The monkeys which today inhabit African regions closest to Egypt¹ are the vervet monkey² (Cercopithecus aethiops L), the patas monkey (Erythrocebus patas (Schreber)), the olive or anubis baboon (Papio cynocephalus anubis L , sometimes regarded as a distinct species P. anubis Cuvier),³ the hamadryas, desert, or sacred baboon (P. hamadryas L)⁴ and the gelada baboon (Theropithecus gelada (Rüppell)).

It is abundantly clear that the ancient Egyptians were well acquainted with the hamadryas baboon.⁵ It was accurately and frequently represented and was prominent in religious and mythological thought. It generally bore the name ḥn (see further below).

Two other monkeys represented by the Egyptians were named qf and kyky. From the general shape and bearing of the animals it is clear that the first was a guenon (the vernacular name of the genus Cercopithecus) and the second a baboon (Papio).⁶ In neither case, however, is the colouring depicted in the ancient sources entirely consistent with the monkey species which, on zoological grounds (see above), are the most likely to have occurred in ancient Egypt. The Egyptians' guenon is shown in coloured representations with red hands, feet, face and rump⁷ whereas C.aethiops has a sooty black skin and very noticeable bright blue scrotum.⁸ The colouring of the fur, a greyish green, is, however, consistent with C.aethiops.⁹ The animal with the name kyky is depicted with a dark green coat like that of P.c.anubis, but again has red extremities,¹⁰ although the only baboon with pink skin is the hamadryas.¹¹ It is shown without pale fur on its underside, however, like P.c.anubis and unlike P.hamadryas.¹² The conclusion that kyky named a sub-group of P.hamadryas is, perhaps, attractive.¹³ Nevertheless, such an identification cannot be accepted without reserve. The bones of anubis baboons have been identified from Egyptian mummies;¹⁴ the general coat colour of the kyky accords with that of the anubis baboon and it is evident from representations of the vervet monkey (which was kept as a pet and must, therefore, have been well known) that inaccuracies in pictures did occur.

Given the very similar distribution of C.aethiops and E.patas over the northern savannah belt in Africa¹⁵ it is surprising that E.patas was not equally commonly depicted by the ancient Egyptians.¹⁶ Vandier d'Abbadie¹⁷ noted two species of cercopithecine monkeys, though with

somewhat garbled names. Her 'cercopithèque griseo-viridis Aethiops' is presumably C.aethiops;¹⁸ her 'cercopithèque Ruber'¹⁹ is unidentifiable and in any case (from the description) probably not E.patas.²⁰ It may be that the otherwise unidentified kiry (see Ch.14) designates this monkey. The kiry was imported from Kush and could dance and be taught to recognise speech, all of which call to mind the patas, which Hill referred to as the 'dancing red monkey'.²¹

Störk recently put forward the proposition that the gelada baboon (given the vernacular name 'baboon' because of its long face rather than any close relationship to the genus Papio) may have been known to the Egyptians, or at least to the inhabitants of Meroe in the Greco-Roman period.²² The suggestion rests on the identification of the 'Sphinx' monkey mentioned by Agatharchides²³ and Pliny,²⁴ and stated to come from 'Ethiopia' (ie from near Meroe where the Ptolemies captured elephants) and near the island of Artigula, somewhat north of Napata, as the gelada. Assuming that this identification and the reports of locality are correct²⁵ this would indicate a more northerly distribution of T.gelada than at present.²⁶ Störk does not give any references to earlier Egyptian descriptions or representations of this animal though an ostrakon from Amarna may show this monkey²⁷ and it is possible that one of the very rare terms which appear to designate monkeys may refer to this species (see below).

As indicated above no monkeys are present in modern Egypt and it is difficult to establish from the ancient records when they disappeared from that country.²⁸ Baboons appear in rock drawings from upper Egypt/lower Nubia,²⁹ and the mountainous terrain of upper Egypt would seem an ideal habitat for the cliff-roosting hamadryas.³⁰ Baboons and guenons were depicted in the Old Kingdom as domesticated animals³¹ and in the Middle Kingdom apparently in the wild also.³² By the New Kingdom, records indicate that they were imported³³ though naturally this does not of itself mean that they had ceased to exist in Egypt (cf the import of t_{sm}, i_w, 3_{by} etc.); the sharp decrease in the number of representations of monkeys after this period, as noted by Vandier d'Abbadie,³⁴ may indicate that they then became less common.

As mentioned already the most common appellation of the hamadryas baboon was i'cn (Wb I, 41, 5-8: Pavian), feminine i'cnt (Wb I, 41, 9: der weibliche Pavian).³⁵ A number of variant forms are known: cnr (Wb I, 192, 15: Pavian), cnw, cnv, cn', cn'n, cn', cn' (Wb I, 170: Pavian), cnv, i'cn', i'cn'w, i'cn', 3'cn, 3'cnw, 3'cnv, plural i'cnw, i'cn'iw, cnvw.³⁶

This variety of forms seems intended to convey a sound, perhaps the animal's cry, and indeed ḥnw is attested with the meaning 'a cry' or 'wail'.³⁷

The term for this baboon survived into Coptic as HN(S), EN(B), ANA(O) (CD 66b: 'ape')³⁸ where it is recorded as the form taken by Thoth.³⁹ This echoes ancient descriptions and representations of Thoth, the patron of scribes and recorder in the scenes of the judgement of the dead, as a baboon.⁴⁰ The deities Hedjwer,⁴¹ Baba,⁴² Isden or Isdes⁴³ and certain forms of Khons⁴⁴ were also portrayed as baboons.

The hamadryas was associated in particular with the sun-god.⁴⁵ Its habitual morning and evening journeys between sleeping places and feeding grounds with the accompanying noisy activity⁴⁶ were interpreted as, or came to represent, a welcoming of or valediction to the rising and setting sun. Baboons are often depicted with their arms raised in a gesture of adoration towards the sun's disc⁴⁷ and in the texts are said to foretell (anticipate?), praise, sing to and dance for the god.⁴⁸ In this context they may be termed htt⁴⁹ (Wb II, 504, 4: Art Pavian) or ḥmy-htt⁵⁰ (Wb I, 74, 18: Bez. der Affen, die zur Sonne beten) as well as ḥn. htt too seems to be an onomatopoeic term describing their cries.⁵¹

A number of other terms applied to baboons are known largely, if not solely, from religious texts, though some (eg bnty) are quite common in other contexts. A group of eighteen are known from certain tomb scenes⁵² in which the baboons depicted are described as 'the gods who open for the great soul' and 'the gods who praise Re when he enters the underworld'.⁵³ The names seem to have been considered in sets of three :

ḥb-t3⁵⁴, ḥb-ḥb-t3⁵⁵, ḥknw⁵⁶ (once ḥknw);
bnty⁵⁷ (Wb I, 464, 9-12: Art Pavian; var. bnw, Wb I, 458, 6: Pavian),
ḥf⁵⁸, dhdh⁵⁹ (Wb V, 607, 2: Art Affe);
ḥkn-m-bs.f⁶⁰, ḥb3w⁶¹, and an unnamed baboon;⁶²
wn-t3⁶³, b3-t3⁶⁴, m3n-r⁶⁵;
ḥmy-k3(r)⁶⁶; hnty-t3.f⁶⁷, hnn⁶⁸;
htt (Wb ref above), p3tt⁶⁹ (Wb I, 500, 6: Bez fur Pavian) and bsy.⁷⁰

The significance of some of these names is obvious (see relevant footnotes). The absence of ḥn itself from this group of words is noteworthy. This term seems, at least prior to Ptolemaic

inscriptions,⁷¹ to be restricted to the actual animal, thus corresponding to the binomen P.hamadryas, whereas the other names appear to be epithets, derived from the animal's appearance and behaviour.⁷²

Baboon and sun god are mentioned in even closer association in some texts. The 'baboon with the strong name' is recorded in parallel with the hwnt which defeats Seth and his companions, the enemies of Rē'.⁷³ Baboons accompanied the solar bark⁷⁴ - of their adoration of the sun, mentioned above - and Rē' himself was called 'baboon of the underworld'.⁷⁵

A baboon seven cubits high is mentioned in the Harris magical Papyrus⁷⁶ and eight baboons 'in the open court' (Theban deities) in P. Bologna 1094.⁷⁷ A 'great baboon who eats the gods' appears in the Coffin Texts,⁷⁸ but deities are also said to live off baboons' entrails.⁷⁹ The deceased pharaoh's clothing included items of baboon hide.⁸⁰ In the Pyramid Texts baboons are recorded as being killed by, and themselves killing, a knmt animal,⁸¹ and ꜥn (like knmt) is attested as the name of a constellation.⁸²

The vervet monkey was known by the name qꜥf (Wb V, 158, 12-16: Art kleiner Affe, Meerkatze), fem. qꜥft (Wb V, 158, 17-20: Äffin, weibliche Meerkatze) with variants qwf (Wb V, 160, 9: Nebenform zu qꜥf 'Meerkatze'), qf (Wb V, 166), qfwt and qꜥfy.⁸³ Many representations of this monkey are named.⁸⁴ The term has been compared with various similar Semitic words: Wb offered Hebrew qōp;⁸⁵ Klein⁸⁶ compared in addition Syriac qwp, Mandaic gupa, Sanskrit kapi, Middle Persian kapiy, Armenian kapiḳ, Greek κῆπος/κῆβος and Neo-Babylonian paqû, glossed û-qu-pi.⁸⁷ Since the latter is recorded in various texts as the name of an animal from Egypt⁸⁸ Klein suggested that the Semitic words were loaned from the Egyptian.⁸⁹ He also compared the Akkadian paqû with Berber abaqus/bugə noting that 'these in turn may go back to an ancient African term for "monkey"'.⁹⁰

The vervet monkey, too, had a role in religion and mythology though much more restricted than that of the hamadryas. It also was associated with Rē' who is described as 'he who is over his qꜥft'.⁹¹ and with the dwarf of heaven (the aged Rē') who is described as 'having the face of a qꜥf with the hairs of a ꜥn', whose 'appearance is that of a qꜥf after reaching old age'.⁹² In certain instances there seems to have been some confusion between the two types of monkey.⁹³ The qꜥf also appears

independently;⁹⁴ the female is mentioned in the Pyramid Texts⁹⁵ and the Coffin Texts.⁹⁶

Being such a popular domestic animal (in one text it appears in parallel with a cat)⁹⁷ it is not surprising that glf appeared frequently as a personal name;⁹⁸ ḡn, however, does not occur used in this way.⁹⁹

The word kyky (see above; note too Wb V, 116, 2, for the spelling of k3yk3y¹⁰⁰) is one of a number of terms for monkeys built around the consonant k recorded by Wb. The simple form kyw (Wb V, 110, 4: Art Affen) appears only in the list of produce given by the snake in the story of the Shipwrecked Sailor to the unfortunate traveller,¹⁰¹ and may therefore, be presumed to be an animal of Punt,¹⁰² like the gwf with which it is mentioned. The feminine form k3yt (Wb V, 110, 5-6: die Äffin) occurs in the Book of the Dead and also as an epithet of Hathor at Dendera.¹⁰³ The reduplicated form occurs in the 'Decree' of Haremhab¹⁰⁴ and the Chester Beatty dream papyrus¹⁰⁵ (k3yk3y and k3ywk3yw respectively) and on two ostraca¹⁰⁶ (kyky, k3k3). Two other words should also be taken into consideration here: k3wty¹⁰⁷ and krlw,¹⁰⁸ though they may well designate entirely different species. Once again the spelling seems to suggest an attempt to render a noise.

Ṣsr (not in Wb) is found in the Coffin Texts¹⁰⁹ and in the Chester Beatty dream papyrus.¹¹⁰ Gardiner¹¹¹ noted of the latter: 'The determinative suggests a quadruped, perhaps a monkey'. Brunner¹¹² compared the term with the srw of P.Ebers¹¹³ which was read by Wb. Droq., however, as 'Widder' (ie sr).¹¹⁴

A further term with monkey determinative occurs in the Ramesseum Onomasticon published by Gardiner. The word is imperfectly preserved; the b at the beginning is clear but is followed only by a tick, possibly for -f. Gardiner suggested the translation 'cynocephalus ape' (ie baboon).¹¹⁵

It is noteworthy that the only occurrence of a monkey name in the medical texts is recorded in an invocation,¹¹⁶ unlike many other animals whose parts were often cited for use in prescriptions.

Monkey determinatives are also uncommon, occurring in the word knd (Wb V, 56, 16-57, 12: wütend werden, in Zorn geraten, zürnen) which has been compared with Arabic kird 'monkey',¹¹⁷ and once in h'cr (Wb III,

244, 3-7: wütend werden,.... der Grimm). The determinative is of a baboon, whose outbursts of rage have been noted by zoologists.¹¹⁸

Chapter 11 : Pigs

Greco-Roman sources relate that the ancient Egyptians avoided eating the flesh of pigs and even touching the animals themselves¹ and that swineherds were accorded only low social status,² views adopted by Hopfner³ and other scholars.⁴ Pigs (Sus scrofa L)⁵ are, however, mentioned in ancient Egyptian livestock lists⁶ and in the ostraca⁷ and are represented in various tomb scenes,⁸ so they were clearly considered on a par with other domesticates such as the goat. The use of the parts of the pig in the medical texts⁹ would likewise indicate that they were not generally taboo, although it is clear that their mud-grubbing habits were not highly regarded,¹⁰ and to dream of a pig was a bad omen.¹¹ Some later evidence of a pig taboo may be deduced from P.Jumilhac.¹² An incantation against pig bites¹³ shows a more pragmatic fear of pigs.

In all these contexts the word for pig is š3i (Wb IV, 405, 7-10: das Schwein), which survived into Coptic as ⲉⲩⲩⲱ (CD 63a: 'sow').¹⁴ The more common Coptic term was ⲡⲓⲡ (CD 299a: 'swine, pig')¹⁵ of which the Egyptian antecedent was rrī¹⁶ (Wb II, 438, 7: das Schwein). Both terms appear in one passage from the Book of the Dead¹⁷ where the sight of Seth, in the form of a black pig (rrī km), blinded Horus; to cure him the Ennead pronounced pigs (š3i) an abomination (bwt) to him. Rrī is not a purely mythological term (cf db and h3b for the hippo in different contexts) as it occurs in the medical P.Ebers¹⁸ where the part used (3s) is the same as that from a š3i in another medical text. The feminine form rrt (Wb II, 438, 8-11: die Sau) also occurs in a non-mythological context,¹⁹ and is attested as a personal name.²⁰ Elsewhere the term recorded for the female pig is simply (š3i) hmt.²¹ (For hmt see especially Ch.4 : Cattle). Rrt otherwise designated the part-hippopotamus deity Tuēris,²² and may in a late text designate the hippopotamus itself.²³ The word is also used of a constellation, thought of as having the form of the Tuēris animal.²⁴ Tj š3i was used to designate another 'Mischwesen', the monster, part-crocodile-part-hippo-part-lion, believed to devour the hearts of the unjust in the afterlife.²⁵ Piglets were called smsw 'young',²⁶ though rrī appears in this context also.²⁷

Pigs were associated with Isis (Min-Horus is called 'son of the white sow (š3i t)')²⁸, Nut²⁹ and Rē,³⁰ but most commonly with Seth.³¹ The Seth animal appears at Beni Ḥasan with the name š3³² (Wb IV, 401,

6-7: Name für das Tier des Seth), and is later called ḥḥ (Wb I, 134, 20: Art Hund). The identification of the Seth animal has generated a vast literature³³ and its likeness to the pig has been both asserted³⁴ and denied.³⁵ ḥḥ with pig determinative is recorded as an animal of the desert,³⁶ as was obviously the case with the ḥḥ animal at Beni Hasan, but this is not proof that the ḥḥ animal was, or had been, derived from the pig. Though classical sources indicate that the pig was considered 'typhonian',³⁷ it has been argued that the association of Seth and the pig was late in date³⁸ and it should also be noted that Seth could assume various animal forms. The Seth animal was often drawn (misinterpreted) as a donkey so the pig connection cannot have been particularly strong. There is, indeed, some evidence from ancient Egyptian sources that the ḥḥ/ḥḥ was considered as - or closely related to - some type of dog or jackal. (See Ch.5 : Dogs and Similar Animals).

In addition to ḥḥ and rr a number of rare words with pig determinative are attested. 'Iph (Wb I, 69, 14: Schwein), of which 3ph (Wb I, 9, 4: etwas geopfertes) may be a variant writing, occurs only twice³⁹ prior to the Ptolemaic period; one of these attestations provides the only example of a pig in an offering list.⁴⁰ 'Ibk, perhaps from bk 'be(come) pregnant' (Wb I, 481, 1-11: schwanger werden, schwanger sein... schwängern) occurs in the Book of the Dead⁴¹ and in the Coffin Texts.⁴² Hwt and hdr (neither in Wb), both occur in toponyms⁴³. Dawson⁴⁴ seemed to see these words as separate from the pig determinative, and understood 'pig-striking'. Hdr, however, is not attested, at least in Wb, as a verb, and the determinative, in any case, generally shows an animal other than a pig. (See Ch.14 : Miscellaneous Mammals.)

Chapter 12 : Sheep

Two types of sheep can be identified from Egyptian reliefs, one with horizontal spiral horns, the other with horns curling down at the side of the head.¹ The first type appears in the Middle Kingdom and earlier;² the second in the Middle Kingdom and later.³ Hieroglyphs tend to show the former sheep (Sign List G10 and G11) though late examples may show the second.⁴ Khnum represented as a ram took the form of the first type⁵ while the ram of Amun-Rē⁶ was depicted with side-curved horns.⁶ In mythological texts these types were referred to as b3 (Wb I, 414, 9-14: heiliger Bock) and rhn (Wb II, 441, 1-3: der heilige Widder des Amon) respectively. Though rhn had a very restricted usage, applying only to the ram of Amun-Rē⁷ and to Seth,⁸ it was also popular as a personal name.⁹ B3 was applied to many deities,¹⁰ especially the god of Mendes whose name comprised the element b3 (Banebde: Wb I, 414, 9),¹¹ and Amun and Rē⁶ could also be addressed as b3¹² or b3 b3w.¹³

Wb recorded another term for sheep, šft (Wb IV, 456, 4-8: anscheinend Name der älteren ägyptischen Widderart). This term is determined by a ram's head with horizontal horns (Sign List F7). It does not appear in contexts which would mark it as a simple species designation - in livestock lists for example - nor was it associated with particular deities, like b3 and rhn. It occurs rather as,¹⁴ or in comparisons involving,¹⁵ some kind of ornament: hr šfyt appears to be the name given to the ram's head which could decorate the prow and stern of ceremonial boats.¹⁶ (For other animals in similar settings see sm3 and twt-mrwy).

A fourth term with ram determinative, ḥpw, noted by Wb (I, 180, 3: Name eines heiligen Widders) occurs only once, in parallel with b3, as an epithet of Osiris.¹⁷

Despite the distinctions made in mythological contexts, the Egyptians do not appear to have given separate names to sheep with horizontal or side-curved horns as livestock.¹⁸ In lists of domesticated animals, only gr¹⁹ (Wb III, 462, 7-13: Schafbock, Widder) appears as a term for sheep.²⁰ Although early representations of both sheep and goats exist the term gr is much less common than ḥnh 'goat' in the livestock lists,²¹ and Janssen²² wondered, owing to the paucity of references to gr in the Ramesside ostraca, whether ḥnh might cover both sheep and goats. However, although some reliefs seem to indicate that they were considered to be closely associated²³ (cf also sheep and

goats as determinatives of wt, and distinguished as wt hdt and wt ndst respectively²⁴), there are sufficient instances of sr and nh in parallel to establish that they designated separate groups of animals.²⁵ One such instance was indeed known to Janssen from the ostraca.²⁶ In view of the almost complete absence of sr from the Deir el-Medîna texts it is interesting to note that sheep are not depicted on ostraca;²⁷ the animal resembling a sheep on one is labelled b3 nh and shows the hybrid sheep-goat of the god of Mendes²⁸ which should not be regarded as a zoological species. The evidence of these ostrakon sketches should not be used to prove that sheep were absent from Deir el-Medîna ; a donkey is drawn only once on an ostrakon though over 100 references to 3(t) 'donkey' are recorded on the ostrakon texts (see Ch.8: Horse and Donkey).

Sr is also the only term for sheep to occur in the medical texts.²⁹ The absence of b3 and rhn from this corpus would indicate that they were not true (zoological) names, terms for species or types, but very restricted sub-sets of sr applicable only to gods or to sacred animals³⁰ (note that the rhn is called 'son of the sr',³¹ and that b3 and sr may appear in parallel³² so connections between the groups were evidently recognised).

Sr survived into Coptic as εκοογ (CD 61a: 'sheep'),³³ though rhn did not, and b3 only in βαλαμπε (CD 39a: 'goat'),³⁴ presumably derived from the phrase b3-n-pt³⁵ (cf too βαρηιτ CD 43b: 'he goat' also connected with b3).³⁶ cpo (CD 354a: 'ram') is also derived from this word.³⁷

Ewes appear as srt (Wb III, 462, 14: das Schaf)³⁸ and w3pt (Wb I, 251: das Schaf),³⁹ the latter, from the context, apparently designating a sheep suckling young.

Coptic also preserved an earlier term in ολειε (CD 254b: 'ram').⁴⁰ The word, probably of semitic origin, appears possibly three times in Egyptian texts, twice in records of provisions (Wb I, 106, 5: Widder?; Wb I, 38, 16: Hirsch(?), Widder(?))⁴¹ and once in a list of animals as offerings.⁴² It is, however, also possible that these writings (or some of them) represent Coptic ειογλ (CD 77a: 'hart, hind') which replaced the earlier Egyptian term for 'deer' (hnn - see Ch.2 : Antelopes and Similar Animals).

A group of sheep (as seen in certain agricultural scenes) could be designated hst (Wb III, 154: die Schafherde (welche die Saat eintritt)) or sht (Wb III, 464, 2: die Schafherde, welche die Saat eintritt; cf sh3t: Wb IV, 209, 9: Herde von Eseln),⁴³ both, presumably, writings of the same word. In one instance [sht] is replaced by an ideogram of three sheep.⁴⁴

For the Wild or Barbary Sheep (Ammotragus lervia Pallas) see Ch.2: Antelopes and Similar Animals; when this animal appears in tomb scenes it is depicted with other members of the 'wt h3st and there is no evidence to suggest that the Egyptians regarded it as substantially different from gazelles, oryxes etc.

The words s3bt and gnw, both from the Book of the Dead,⁴⁵ which in the version published by Naville have sheep determinatives, are probably miswritings of the similar cattle terms (see Ch.4: Cattle); Allen⁴⁶ translated 'my spotted cows and longhorns' and Barguet⁴⁷ 'mes vaches bigarrées, et mes boeufs negau'.

Chapter 13 : Miscellaneous Mammals (A)

A number of terms can be identified with varying certainty as the names of animals; these are discussed in alphabetical order over the next two chapters.¹

ibtrsw (Wb I, 65, 4: Name eines Tieres). The word occurs only once (in a prescription in P.Ebers) and may be a miswriting of (or the correct spelling of) prtrsw (not in Wb) in another medical text, in a prescription which contains many of the same ingredients.² In the latter text mrht prtrsw appears between the fat (also mrht) of a lizard (š3) and the fat of a snake (hf3w) which might indicate that it was a similar type of creature; in P.Ebers ibtrsw follows hf3w but itself is followed by 'mouse' (pnw) and 'cat' (mlw), so the identification of ibtrsw/prtrsw as a reptile must remain a tentative suggestion.

inh (Not in Wb). The term is a hapax. The animal is mentioned in the Kamose Stela where women peering from windows are compared to 'the young of the inh within their holes.'³ Such holes (b3b3w)⁴ are mentioned as the dwelling places of snakes (hf3w)⁵ and mice (pnw)⁶ as well as being used of bodily orifices and parts of the river (perhaps deep depressions in the river-bed). If the fort walls mentioned in the text were indeed as reconstructed in the drawing of Smith and Smith⁷ the inh would seem to be an animal inhabiting deep burrows in, for example, the high banks of canals. Translations have included 'mice(?)' (Habachi)⁸; 'snake', 'worm' or 'lizard' (Smith & Smith: 'We rather prefer the gekko lizard');⁹ and 'weasel' (Harris,¹⁰ preferring a sinuous creature as suggested by the homonym inh 'eyebrow' (Wb I, 99, 1-2: Augenbraue)).

m'mw (Wb I, 186, 10-11 : ein vierfüßiges Tier... Name eines Torwachters im Jenseits). As the name of an animal, m'mw appears in a medical text in a prescription for an ear complaint¹¹ and in a veterinary text where its smell is referred to.¹² In the latter the word has a specific determinative, unfortunately partly missing where the papyrus is damaged; Griffith described it thus: 'The determinative is an animal with short legs, tail slanting outwards and downwards, the head unfortunately lost. It may be the ichneumon, or a rat'. The same identification was proposed by de Wit¹³ who compared m 'swallow' with the mongoose's swallowing of its prey, snakes. The word has also been compared with Coptic (Oxyrhynchitic) εμim¹⁴ translated 'shrew mouse'

by Crum¹⁵ and thus taken to be not the mongoose but the shrew, a voracious eater capable of consuming two and a half times its own body weight daily.¹⁶ This was also the view of Vycichl¹⁷ following Brunner-Traut's study of both the shrew and the mongoose and the words ḥmḥmw and ḥ3trw.¹⁸ Both these designations appear as the names of deities on the base of a statue in Berlin¹⁹ and Brunner-Traut believed that both were associated with M(H)nty-(n)-ḥrty²⁰, originally a falcon-god at Letopolis, but as early as the Pyramid texts²¹ associated with Horus of Letopolis, whose eyes, one sighted and one blind, symbolised sun and moon, day and night.²² The ḥmḥmw is represented in the Underworld as a deity with the head of an animal with a long pointed muzzle and prominent whiskers.²³ In demotic the ḥmḥmw is described as telling the future and being hot tempered;²⁴ in another demotic text it is said to cause blindness in a man and erotic feelings in a woman. The latter text also provides the only explicit association of the ḥmḥmw and Letopolis²⁵ though in a Ptolemaic text Osiris, Lord of Abydos, is addressed as ḥmḥmw by the goddess of the Letopolite nome.²⁶ These texts were taken by Brunner-Traut to indicate that the ḥmḥmw was a shrew, though the evidence suggests that ḥ3trw should be translated in this way. The close association of the ḥmḥmw with the ḥ3trw (see Ch.14) may indicate that it was a similar animal. (See also ḥrḥr, immediately below).

ḥrḥr (Wb I, 210, 7 : ein essbares Tier). The term was recorded from only one Ptolemaic text by Wb²⁷ though it may also have occurred in Demotic.²⁸ A further attestation is found in a magical papyrus,²⁹ though in an obscure context. The word is included here because of comparisons with ḥr (see Ch.7 : Goats)³⁰ and ḥmḥm (see immediately above).³¹ Meeks'³² reading of ḥr from the Ptolemaic text (which refers to Mendes) is possible, but the magical papyrus reference seems to confirm the existence of a discrete animal ḥrḥr. That it is described in the latter as emerging from mud is reminiscent of the belief that mice were generated spontaneously from Nile alluvium³³ and it may, therefore, have been a mouse or similar small beast.

ḥd (Not in Wb). This animal is identified with Re in the magical texts on the statue of Djed-Hor; when the god was battling with the serpent demon Apophis he did so in the form of an ḥd of 46 cubits.³⁴ It is tempting to see in this snake-slaying animal the mongoose (Egyptian mongoose, Herpestes ichneumon (L), often known simply as 'ichneumon') though other animals will kill snakes.³⁵ A figure called ḥdy is shown similarly vanquishing a snake in the Book of Caves.³⁶ The mongoose(?)

appears to determine the phrase hm n r 'representation of Rē' elsewhere in the Djed-Hor text.³⁷ The d also occurs in association with the sun-god in the Coffin Texts,³⁸ where it is described as 'who cannot see the brow of Rē-Atum'. Faulkner suspected that a nocturnal or semi-nocturnal animal which seldom saw the sun was meant and suggested 'jackal' as a translation. This is unlikely given that d, associated specifically with Atum, appears in the inscriptions over two mongooses on a naos from Cairo³⁹ - d (originally read ed⁴⁰) is written over one, over the other itm k3 iwnw t3 rwdt k3 db 10 - 'Atum, der Schutzgeist Heliopolis, fester Stein, hoch 10 Finger' (Sethe's translation).⁴¹ itm k3 iwnw is also the name engraved on a Saite statue of a mongoose published by Sethe.⁴² Sethe suggested that the name of the animal was originally nd. The name of the Heliopolitan nome 'Gau des nd-Herrschers' could thus be explained as the nome of Atum. The name has also been interpreted as 'the perceiver'.⁴³ (For h3trw, often quoted as the name of the mongoose, see Ch.14).

wr (Not in Wb; noted by Meeks, AL 78.1029). From the Coffin Texts, in the phrase: 'look on the face of the Great One'. wr is determined by an animal sign (var. BIBO) of which de Buck noted: 'the tail differs from that of sr' ('sheep', 'ram').⁴⁴

whswt (Not in Wb; noted by Meeks, AL 78.1066). Meeks gave only one instance of the word from the Coffin Texts and translated: 'un animal; les prédateurs(?)'.⁴⁵ The word is replaced in the Book of the Dead variant with bhwy (recorded by Wb under bhn 'dog'); see Ch.5 : Dogs and Similar Animals.

bq (Wb I, 482, 9: Name eines beißenden Tieres). The word appears in the Harris magical papyrus together with the animals dprm (see below) and hwy (see Ch.8 : Horse and Donkey).⁴⁶ It is tempting to compare a very similar phrase in the same papyrus referring to three dangerous animals, a lion (m3i), an unknown creature which has been identified as a bear (htmt - see below) and a jackal (wne).⁴⁷ It was perhaps this which caused Chabas,⁴⁸ who transcribed the word bq3sw (sic), to comment: 'ce doit être le léopard, nommé 𓂏𓂛𓂏𓂛 [sic] dans un autre texte.'⁴⁹ Hwy has been considered to name Seth in the form of a donkey;⁵⁰ the danger from these three animals was, therefore, perhaps more mythological than real.

pnw (Wb I, 508, 6-10: die Maus). A considerable number of mice and mouselike species - spiny mice, gerbils, jirds, jerboas and sand-rats,

for example - are known to inhabit modern Egypt⁵¹ but only one ancient Egyptian name may be said with certainty to apply to these creatures. This is pnw, sometimes translated 'mouse'⁵², sometimes 'rat'⁵³ or even 'jerboa'.⁵⁴ The word survived into Coptic as πιν.⁵⁵

Since named representations appear so seldom it is not easy to decide whether pnw applies to all mouselike rodents⁵⁶ or merely the most common type (ie house mouse,⁵⁷ Mus musculus L, as might be inferred from its depiction with a cat (mīt)?).⁵⁸ Cat (mīw) and mouse (pnw) also appear together in a mathematical text recording a multiplication by sevens (seven houses, 49 cats, 343 mice etc.),⁵⁹ in a medical text⁶⁰ and in a text from the Book of the Dead where the mouse is called 'the abomination of Rē'.⁶¹

Other texts mention pnw in burrows (bjbjwt)⁶² which is of little help in establishing the precise identity of the animal as all the species mentioned above dig burrows. These burrows were vulnerable to the waters of the inundation; one text compared the soldier's hard life with that of the mouse during the flood season.⁶³ The pnw is also recorded as a bad omen⁶⁴ and in the fields as a pest.⁶⁵ This characteristic is fairly uncommon among Egyptian rodents but is displayed by the Nile Grass Rat and the Egyptian Bandicoot Rat; other species, such as the House Mouse and some types of Spiny Mice can also be found in cultivated land near buildings.⁶⁶ Another text mentions pnw in the desert.⁶⁷ Unfortunately the pnw depicted at the causeway to the pyramid of Unas are shown on bare registers without any indication of habitat.⁶⁸

The pnw were ranked by the ancient Egyptians among the most insignificant⁶⁹ and the most helpless⁷⁰ of creatures and it may be that this insignificance led to small rodents' not being very clearly distinguished in the modern zoological sense - compare the relatively restricted number of terms surviving for insects from ancient Egypt (although insects are the most numerous animal type worldwide). It also appears, however, that the Egyptians distinguished between some species and even perhaps subspecies, and it may be that the texts which have survived give a distorted picture.

Despite their evidently lowly position in the animal kingdom, the pnw were important as materia medica and are recorded several times in the medical texts.⁷¹ In one case the mouse is to be eaten⁷²; references to the eating of mice are known from other contexts too.⁷³ They were,

in addition, popular subjects for sketches and satirical drawings.⁷⁴ Pnw is also recorded several times as a personal name⁷⁵ and in the names of plants.⁷⁶

prt (Not in Wb). The sole representation of this animal is preserved at the Unas causeway.⁷⁷ The figure of the animal itself is lost - all that remains is the curve of its head and back. It is shown in the scene next to another animal (hmt - see below) giving birth to young, and appears to have been a similar small creature.

prtrsw (Not in Wb). See the discussion of ibtrsw above.

pkrh (Not in Wb). The term is recorded from the temple of Niuserrē.⁷⁸ Only the back leg of the animal to which the name seems to apply remains (it cannot apply to the next animal on the register as this is named gsfnw). For further discussion see Ch.2: Antelopes.

m3s (Wb II, 33, 2: ein Tier von roter Farbe). Wb referred to a passage in the Book of the Dead which runs: 'I am that red m3s (animal) which is in the writings'.⁷⁹ Red m3sw also occur in the Coffin Texts.⁸⁰ M3sw 'in a team' (m htrī) are mentioned in a fragment of text published by Caminos,⁸¹ who further noted a title 'overseer of m3sw in the temple of Onuris'.⁸²

The term may be compared with two very similar words, mīst, var. mrst, from the Coffin Texts,⁸³ and m3st, which appears in Old Kingdom tombs as the name of a piece of clothing, specifically a type of ī3' (Wb I, 27, 15: Allgemeine Bezeichnung für Schürze).⁸⁴ A plural writing of m3st also occurs in a New Kingdom text, among animals hunted by Pharaoh in Syria (at Rbīw near Kadesh).⁸⁵

In the latter text Badawi read m3st as an error for msyt, known from the phrase msyt nt ssmt, 'young of the horse', and translated the term 'Füllen'.⁸⁶ This was rejected by Vikentiev on the grounds that 'foals' would not be found alone and no other horses are mentioned in the text. Keimer also disagreed.⁸⁷ He asserted that msyt would never have been written 'd'une manière aussi bizarre' (without the ms sign) and that m3st 'est certainement le pluriel du nom d'un animal syrien sauvage'. Bearing in mind the tendency in Egyptian lists to run from largest (most important) to smallest (least significant),⁸⁸ Vikentiev assumed m3st to be larger than the hares (sh't) but smaller than the gazelles (ghs) mentioned in the same text. He noted the 'red m3s' of

the Book of the Dead and deduced of m3st : 'Ce sont des petits animaux au poil fauve. On se demande s'il ne serait pas du genre Vulpes, un renard ou quelque autre canidé'.⁸⁹ This suggestion certainly seems to be consistent with the other types of animals mentioned in the Old Kingdom clothing lists noted above.

A number of the terms occurring in the clothing lists are also attested as the names of animals. B3⁹⁰ and b3smc⁹¹ are given in Wb (Wb I, 415, 4-6) as 'Panther... Leopard, Gepard'.⁹² Ntrt as an animal name occurs only in the temple of Niuserre in a scene showing various animals giving birth to young,⁹³ and seems to name the cheetah. Hsdd as an animal, probably a member of the Canidae, is found in P.Jumilhac in connection with wnš (jackal) and tsm (dog) and elsewhere appears as the name of a dog-headed, falcon-bodied being together with other terms for jackals and dogs.⁹⁴ Ibt was compared by Edel⁹⁵ with inbt, translated by Keimer as 'caracal'.⁹⁶ Ib with animal determinative was also noted as a personal name by Roquet.⁹⁷ wnš is well attested as the name of a type of jackal. t3wd and hn occur only in these clothing lists. Since the other terms in these lists are also used of animals it is likely that t3wd and hn are animal names also.⁹⁸ Furthermore, in view of the fact that five of these eight names are applied to members of the cat and dog families, it is also probable that the other terms, m3st, t3wd and hn, also belong to these categories. (For further discussion of these lists see Ch.5: Dogs and Similar Animals and Ch.9: Lions and Other Cats).

Even if the translation m3st 'fox' (or similar) is accepted the m3s(w) and m3st remain problems. Keimer noted the Book of the Dead reference to m3s but when attempting a translation took into consideration the Coffin Text determinatives of m3st showing an animal with horns. He concluded: 'L'animal rouge du Livre des Morts pourrait désigner une espèce de Gazelle, mais aussi le Bubale ou le Daim et le Cerf, bovidés de couleur rougeâtre, tandis que les antilopes Oryx...sont plutôt blanchâtres'.⁹⁹ Allen translated similarly: 'red deer'.¹⁰⁰ Caminos wondered whether the m3sw 'in a team' were mules, but this was rejected by Kitchen because of the writings of m3st with horned animals as determinatives and because of the existence of a word ptr which may be convincingly translated 'mule'.¹⁰¹ Nevertheless the only animals generally depicted 'in a team' are cattle, horses or donkeys, and horses are only shown thus in, or in close association with, battle scenes. The s3bw and is (jackal and Seth-animal(?)) however are depicted in religious texts in pairs or groups of three

drawing the bark of Rē', which is of interest as Caminos' text appears to mention a 'divine boat'. The presence of an 'overseer of m3sw' in a temple would indicate that they were some sort of livestock, (see Ch.5 for dogs (ḥw) in a list of livestock), kept there for sacrifice or for the purpose of religious ceremonies.

Meeks took m3s in the Coffin Texts¹⁰² to mean 'taureau (au poil roux)', comparing Caminos' text. He differentiated m3s(w) from the m1st of the Coffin Texts noting that the latter term: 'paraît se rattacher à mj(3)zw "pointe, piquant" et ses dérivés'; he translated accordingly 'animaux à cornes(?)'. Another example from the Coffin Texts¹⁰³ he rendered: 'peau du taureau m3s(tj)'. This usage he compared with the Old Kingdom clothing lists. The example reads, however: 'I am the m3s of the Bull in Letopolis'; parallel phrases indicate that m1st or m3st 'liver' (Wb II, 44, 11-14: ein inneres Organ... vermutlich die Leber), should be read.

mm (Wb II, 58, 15: ein Tier). The determinative of this toponym shows a canid-like animal with pointed, upright ears and a long tail. The word mmy 'giraffe' may be compared; mm may thus name a spotted member of the family. (For further discussion see Ch.5 : Dogs and Similar Animals and Ch.2: Antelopes and Similar Animals).

mh3w (Wb II, 131, 11: ein Tier). A msktḥw m msk n mh3w appears in the 'Annals' of Tuthmosis III, in a list of tribute from Retjenu.¹⁰⁴ As msk3 occurs elsewhere as a term for animal skins¹⁰⁵ (Wb II, 150, 3-5; Wb II, 149, 10-14) it seems reasonable to assume that mh3w was the name of an animal from Retjenu (Syria-Palestine). That the word occurs only here would indicate that the creature was not native to Egypt. The type of animal cannot, however, be deduced from the context, though since its skin was large enough to produce an arm-band (msktḥw - Wb II, 150, 8-9: Armring) it was presumably not very small.

rhty (Not in Wb). The word appears only in the Coffin Texts.¹⁰⁶ De Buck noted of its determinative: 'Transcription doubtful; some insect (cf. eg. 281c)? [=ktt - see Ch.20: Insects] or a pig (cf. 293a)?'.¹⁰⁷ (the next spell begins r n ḥsf rri). Faulkner¹⁰⁸ translated: 'Spell for driving off the fearsome companions', with 'monster det.'.

htw (Wb II, 503, 11 : ein Tier (im Zauber)). This word, together with its feminine equivalent htt, occurs only once in one of a series of prescriptions in P.Ebers under the title 'remedies for stopping

secretions.¹⁰⁹ A list of ingredients is given and then an invocation to the htw and htt (𐎢 determinative) and the ꜥdn and ꜥdnt (determinatives 𐎢 and 𐎣 respectively) to be spoken while the ingredients are made up (slp) with water prior to being exposed to the dew at night. Presumably, from the determinative, both are animals (or perhaps spirits in animal form) as supposed by Wb. Drog. which translated '[Tier]'.¹¹⁰ The passage was also discussed by Schäfer,¹¹¹ who saw in htw/htt variant writings of the htt, a term applied to sun-worshipping baboons. (For further discussion of this term, see Ch.10: Monkeys). He was not able to identify the ꜥdn(t) and indeed Wb knew it only from this one text. Though Wb recorded the words ꜥdnt 'Art Armband', ꜥdn.t 'Art Beschaffenheit des Kupfers' and ꜥdn.t 'Name eines Öls' they throw no light on the medics' terms.

hwnt (Not in Wb). Apparently only in the Coffin Texts, in parallel with ꜥn, baboon (see Ch.10: Monkeys) and with the 'fiery serpent' (nsrt).¹¹²

hmt (Wb III, 80, 14 : ein Tier). The word occurs as a personal name¹¹³ and in a toponym.¹¹⁴ The determinative shown by Ranke is of a mouse-like creature; in Junker's publication the animal resembles Ranke's determinative for the word hdrt¹¹⁵ showing a longer-legged creature with extended tail and hairy back. The hmt is shown in a desert scene giving birth to young. It has long, prominently depicted whiskers and a long slender, rather weasel-like, body. (Contrast the shape of the pnw in the nearby scenes). This, unfortunately, is not enough to identify it with certainty. Hmt may not necessarily be a species name, as Ranke implied by his translation 'das (weibliche) hmt-Tier', but simply the 'female' of the animal shown. (For hmt as the designation of the females of various animals see Ch.4: Cattle, and elsewhere).

hnty (Wb III, 121, 15: ein Tier mit Stacheln). The srt of this animal are used in a medical text, burnt and soaked in fat, to be applied to the head as a remedy for a disease causing baldness (nsrk).¹¹⁶ Ebbell took hnty to be a name for the hedgehog and he translated the very similar hntj, also of P.Ebers, in the same way (see below). Zu Hülshoff did not translate any more precisely than 'Stacheltier'.¹¹⁷ Given the primary meaning of srt (Wb IV, 190, 24-191, 2: Dorn, Stachel) it seems difficult not to equate the hnty with the porcupine¹¹⁸ (Hystrix cristata L) or one of the seven types of hedgehog¹¹⁹ found in Egypt and represented by the ancient Egyptians.¹²⁰

Keimer¹²¹ believed that hnty may have designated both hedgehogs and porcupines, citing the frequent confusion of the two in modern Egypt.

hnt3 (Wb III, 122, 7: ein Tier). In P.Ebers the 'hairs' of this animal, burnt in fat, are applied to the head for four days to restore the hair during the illness nsk.¹²² The similarity of this prescription to that referring to hnty is such that hnt3 must be understood as a variant writing of this word. Ebbell seems justified in his translation: 'quills of hedgehog'. The hnt3 occurs in another medical text¹²³ in a gloss accompanying the description of a procedure for treating a chest wound. The hnt3 (determinative Q) of the patient's chest (k3bt - Wb V, 11, 2-8 die Brust ...das Knie der Scheitel) is explained as the 'upper head' (tp hry) of his chest, 'it being like the form of a hnt3'. Whether this is a genuine comparison (Breasted compared the man's ribs with the quills of a porcupine)¹²⁴ or influenced by word-play is difficult to deduce.

hty (Not in Wb). The word occurs only in the phrase rnpt nhty¹²⁵ and was taken by Vandier¹²⁶ as rnpt nht 'l'année des hyènes'. Spiegelberg supposed that the phrase referred to some local event¹²⁷ - in a year when food was scarce hyaenas may have scavenged closer than was usual to human settlements and thus been more than usually in evidence.¹²⁸ Vandier also wondered whether the phrase might not be a metaphor referring to a plague of foreign invaders. The use of wnš 'jackal' in 'jackal-Nile' (h(py-wnš)) in reference to a low inundation may be compared. (For htt, hyaena, see Ch.5: Dogs and Similar Animals).

htb (Recorded in Wb III, 203, 16-17: die Hyäne). Where hyaenas are depicted and named in ancient Egypt the name is written htt, though an Old Kingdom toponym shows a (variant) writing htw with hyaena determinative. (See Ch.5 : Dogs and Similar Animals). The two writings in the Harris magical papyrus quoted by Wb under htt are quite distinct from these forms without the additional problem of the appearance of a fairly clear final -p in one of the passages.¹²⁹ In both cases the word accompanies other animal names. In the second it is preceded by m3iw 'lion' and followed by wnš 'jackal' (for these terms see Ch.9: Lions and other cats and Ch.5: Dogs etc). In the first case (presumably the same word though the writing differs slightly)¹³⁰ it is preceded by m3iw 'lion'. In both passages these animals are mentioned together with 'all long-tailed animals which eat flesh and drink blood'. All are, therefore, presumably carnivorous, which would accord with the interpretation 'hyaena'. Lange¹³¹ supported this translation, but

preferred to read the word as a corruption of a separate word htmt, recorded by Wb. De Wit¹³² also read htm, but translated 'des hyènes'.

htmt (Wb III, 198, 14: ein wildes Tier in Syrien). This term is recorded by Wb from two places in P.Anastasi I. In the first instance it occurs with two other animal names, m3l 'lion' and 3by 'leopard' (possibly for rby 'lioness'), in the tree-filled land of Magar.¹³³ The second refers to an apparently historical incident, in which the chief of Isar, Kadjardy, was seized by a htmt in a tree.¹³⁴ This would rule out the translation 'hyaena',¹³⁵ as hyaenas do not climb trees, though big cats and bears do.¹³⁶

The latter reference recalls vividly the scene on the second pylon in Luxor temple depicting Ramesses II's battle at Satuna which shows an Asiatic in a tree caught at the ankle by a bear,¹³⁷ and it was with this scene that Posener¹³⁸ began his proposition that htmt meant 'bear'. Although the place name Isar has not been identified with certainty¹³⁹ (though it has been compared with biblical Asher¹⁴⁰) most authors place it with Magar and Satuna in Syria-Palestine.¹⁴¹ Leopards and cheetahs are still present in the Arabian peninsula and cheetahs at least used to be found in Palestine.¹⁴² In the Bible lions and bears are mentioned together several times¹⁴³ and lions and htmt are mentioned in P.Sallier I as a danger to soldiers in Palestine and Syria.¹⁴⁴ (This does not altogether preclude the translation of htmt as 'hyaena' as striped hyaenas are also found in this area.)¹⁴⁵

Bears are depicted several times in Egyptian reliefs and tomb paintings (almost exclusively as imports) but, unusually, are not named there.¹⁴⁶ The animal in question is likely to have been Ursus arctos syriacus, a sub-species of the European brown bear, sometimes known as the 'Syrian Bear' and described as a 'small, ashy-brown mountain race'.¹⁴⁷

The name htmt itself Posener supposed to be derived from htm 'détruire', meaning therefore 'la destructrice',¹⁴⁸ (rather than htmt 'la détruite' used of the hippo in its rôle as incarnation of Seth¹⁴⁹) and commented: 'Il est assez naturel que les Egyptiens n'aient pas eu un nom spécial pour désigner un fauve qui ne vivait pas sur les bords du Nil'.¹⁵⁰

Other writings of htmt show various determinatives - h¹⁵¹, lion, or leopard¹⁵² and dog¹⁵³ - which may be explained (according to

Posener) by the scribes' ignorance of the form of an animal foreign to Egypt and never adopted into the range of hieroglyphs.

Htmt also occurs in a somewhat obscure context on a Dynasty 18 statue base¹⁵⁴ and in the Ramesseum Onomasticon¹⁵⁵ between the lists of birds and mammals; this would at least not contradict the translation 'bear'.

hts (Wb III, 204, 13 : ein rattenartiges Tier). The word appears only as a personal name. This is unhelpful in the identification of animals as the hieroglyphs in the determinatives of names tend to be small, no sense of scale is given by the presence of other animals, and published copies of the name tend to reproduce different forms of the same determinative.

Ranke¹⁵⁶ translated the name 'die (männliche) Springmaus',¹⁵⁷ which, if the determinatives can be trusted, is surely wrong since the hts has short legs and its stance is differently depicted from that of the jerboa.¹⁵⁸ The Cairo Catalogue described the determinative as an 'Ichneumon'.¹⁵⁹ Before his discovery of named representations of the Striped Polecat or Zorilla (gsfnw), Keimer¹⁶⁰ suggested that the name of this animal should be found among the otherwise untranslated mm, hmt, hdrt and hts. Having examined the Cairo example he concluded that the hts reproduced the Striped Polecat reasonably well, though with some notable differences.¹⁶¹ Despite the later revision of his opinion this was still the identification given by Roquet¹⁶² for the writing hs at Saqqara.¹⁶³ Roquet also suggested a comparison of hts with Coptic 2HTC,¹⁶⁴ which Westendorf translated 'Ichneumon(?)'.¹⁶⁵

hdkk (Not in Wb). The word appears only once, in an inscription from Kawa:¹⁶⁶ these animals, together with snakes, were swept away from the cultivated land by a good inundation. The animal of the determinative has large round ears and a long tail and may have been a 'rat' as has been suggested;¹⁶⁷ the ravages of mice in the fields and the vulnerability of mice during the inundation (see pnw above) may be noted here. The term has been compared with hdk 'cut off' (Wb III, 206, 1: (die Nase) abschneiden) and its form, with the last radical reduplicated, with various other animal names ('ff, hfnn, hdrr, hpr).¹⁶⁸

hdr (Wb III, 214, 11 : ein Säugetier). Occurs in a number of forms, including hdri, hdrit, hdrr, hdrt (Wb III, 214, 12: ein Säugetier),

hdr, hdrw and hdrwt.¹⁶⁹ Numerous attempts have been made to identify the animal which appears as the determinative of the term, but no final conclusion has been reached. A Wb Zettel in Berlin noted of one attestation: 'allerdings wie eine Hyäne' and of another 'Springmaus oä' (apparently Sethe's identification). On one example where hdrt appear in a 'herd' (?hpt) Eisler¹⁷⁰ noted: 'das Wort hdrt... [the determinative he printed is a calf], sonst als "Hyäne" oder "Springmaus" übersetzt, muß hier wohl einen anderen Sinn haben; nach dem Determinativ denkt man an Kleinvieh, was auch einen guten Sinn gäbe. Das Wort kann wohl nur die ägyptische Umschrift eines Femininums von kanaanäisch... hazir, "Wildschwein", "Eber", aramäisch hazira, assyrisch humziru, bzw habaziru sein.' Hdrr as a toponym has been translated similarly by Darby and Ghaliloungui, as 'white-sow'.¹⁷¹ Ranke commented on the determinative: 'Das Wortzeichen hinter hdr und hdrt sieht in den Publikationen einer Hyäne ähnlich, ist aber gewiß ein anderes Tier. Das ägyptische Wort für "Hyäne" ist ht.t (Koptische ⲕⲟⲩⲏⲧⲉ), das nicht als P.N. belegt ist; zum hdrt-Tier vgl. LD III, 166 ...Herr HEUSER möchte den Namen hdrt mit dem (allerdings männlichen) Koptischen P.N. ⲕⲁⲓⲗ zusammenstellen.'¹⁷² Gardiner suggested 'jerboa' for hdri and (in the same publication) that hdrt, which he translated 'mouse', 'may mean weasel'.¹⁷³ 'Jerboa' was rejected by Dawson on the grounds that the Egyptians would not have depicted the familiar jerboa so variously;¹⁷⁴ the determinatives are not particularly 'various', but the legs drawn on the animal are too short for a jerboa.

The position was summed up by Barns: 'Neither hdr... nor hdrt... are securely identified'; 'neither can be a pig... and the equivalent "hyaena" for either seems doubtful in view of the known equivalent htyt[sic] for the latter'.¹⁷⁵

Chapter 14 : Miscellaneous Mammals (B)

h3trw (Wb III, 236, 10: als Name eines Gottes (mit rattenähnlichem Gesicht)). This rare word is generally translated 'ichneumon', the meaning given by Crum to Coptic $\omega\lambda\theta\omicron\gamma\lambda$, which is likely to have been descended from the Egyptian word via demotic h'ctwl.¹ Crum suggested that the Coptic term was originally a loan from Arabic khīṭl and Chaldean hatul 'cat'.² In Wb the word is recorded only from the base of a royal statue in Berlin.³ On two sides of the base the king is described as 'beloved of' a deity; one deity is named ḥmḥmw (see Ch.13), and the other h3trw.⁴ These words were studied by Brunner-Traut; she believed that h3trw (like ḥd - see above) designated the mongoose.⁵ In one Coptic text the $\omega\lambda\theta\omicron\gamma\lambda$ is said to be at enmity with 'all reptiles' and this would accord with the identification of h3trw as a mongoose.

However, a deity called h3try is depicted in the Underworld with the head of an animal with a long pointed muzzle and prominent whiskers reminiscent of a shrew.⁶ Various texts indicate that a deity h3trw was associated with Horus of Letopolis⁷ and inscriptions on bronze statuettes of shrews also connect them with this god.⁸ Mongoose statues, on the other hand, bear inscriptions associating them with Edjo, who is not associated with Letopolis.⁹ It appears, therefore, that h3trw did not denote the mongoose, but the shrew, a few species of which are found in Egypt today;¹⁰ Coptic references which indicate $\omega\lambda\theta\omicron\gamma\lambda$ to be the mongoose should be considered separately.

hwrr (Wb III, 248, 2: als Beiwort eines Kalbes (als göttliches Wesen)). In the Book of the Dead¹¹ the word appears in the phrase bḥs hwrr (for bḥs 'calf' see Ch.4: Cattle). In the Coffin Texts¹² this same phrase is written with the bird determinative used in both bird and insect names. Lacau, who mentioned the Book of the Dead example in a discussion of bḥs h3bw (see Ch.6: Elephant, Rhino and Hippo), compared the form of the word (with reduplicated third radical) with other animal names such as hpr (see Ch.20: Insects) or hfn (see Ch.19: Reptiles). The Pyramid Text phrase hwrr psdt he compared to the hm-psdt with pelican determinative also known from the Pyramid Texts.¹³ It seems possible, therefore, that hwrr named an animal (perhaps a bird?).

hn (Not in Wb). Occurs in an Old Kingdom clothing list from the tomb of Snfrw-snb. It may be an animal of the dog or cat family (see mjs, Ch.13).

hstt (Wb III, 335, 5: Art Tier). Occurs, like hn, in Old Kingdom clothing lists. Other occurrences of the term in P.Jumilhac and at Edfu, and as the name of a jackal-headed deity on a Late Period sarcophagus, indicate that this animal belonged to the dog family (see Ch.5 : Dogs and Similar Animals, for a full discussion).

spks (Not in Wb). The determinative may indicate an animal name; the word appears on an ostrakon from Deir el-Medîna used for writing practice.¹⁴

smr (Wb IV, 139, 10: ein Tier). The references in P. Ebers record that these animals could be killed by the burning of a hnt3sw (det. Sign List I1) and vice versa.¹⁵ Wb suggested that smr was to be understood 'als Feind der Eidechse' and there is a late tradition that scorpions and lizards were sworn enemies.¹⁶ Words for scorpions are, however, well documented (see Ch.20: Insects). Stern gave the translation 'genus lacertae?', though without justifying it. Ghalioungui compared an Arabic term, sammour, for which he proposed the translation 'sable' or 'beaver', from a 14th Century Book of Animals. This animal was claimed to be like one of the cat family or like a mongoose, but with adaptable colouration: clearly a confused beast, and of little help in identifying the smr.¹⁷ Since P.Ebers prescribed one hnt3sw to kill several smr and several smr to kill one hnt3sw it is possible that they were smaller creatures; compare, perhaps, the Intš (see Ch.20) which is apparently like, but clearly distinguished from, the scorpion. The 'cow's-skin' determinative does not help much in the identification of the creature since it was applied to reptiles and insects as well as mammals.

snbtt (Wb IV, 161, 2: ein kleines Tier). The word occurs in a text on the statue of Djed-hor together with a number of other animal names, of which the only readily identifiable example is pnw 'mouse'.¹⁸ Another, qq3, is also recorded by Wb (Wb V, 208, 8: ein kleines Tier); the final term in the list was translated 'poulet' by Daressy. He rendered the passage: 'tu auras peur d'un rat, tu craindras un renard(?) tu courras devant les poulets... un senbeti te fera fuir jusqu'au cimetière'. These are presumably all small and insignificant animals which would not normally be feared; snbtt can be identified only thus far. (See also qq3 below).

snmty (Wb IV, 165, 13 : Art Tier.) In the Coffin Texts¹⁹ and elsewhere²⁰ it is said that the tail (gd)²¹ of a snmty, placed at the stern of a boat, would protect it. Although boats may be drawn with animal heads there seem to be no examples with animal tails,²² though one text records the tail of a wild bull (gmj) at the stern of a boat (see Ch.4: Cattle). (See also tt-mrwy, the animal (bird?) put (for protection) at the prow).

srw (Wb IV, 193, 6 : ein Tier). The word appears in P.Ebers in the phrase srw wr. Wb.Drog. recorded separately from gr(?) 'der Widder' (VI, p.454-455) but suggested that the words might be identical (VII¹, p.772 : Widder(?)); this seems likely. (See also Ch.12: Sheep).

Despite the use of the hare hieroglyph (Sign List E 34) to represent the phonetic group wn, and the appearance in the Coffin Texts of a word wn apparently with the meaning 'hare',²³ the only named representations of this animal record the designation sh't (Wb IV, 236: der Hase; Wb IV, 268, 11: der Hase);²⁴ compare here both wr and mnt denoting 'swallow' (Ch.17). The name is rare, appearing twice in the Middle Kingdom (both examples at Beni Hasan)²⁵ and once in an 18th dynasty stela.²⁶ In the latter the hare is one of a number of animals hunted by the pharaoh in Syria-Palestine, (see also qhs, m3st and 3 hmw discussed in other chapters) and the Beni Hasan representations (together with many others where the animal is not named²⁷) indicate that this was a sport also pursued in Egypt. Neither name survived into Coptic when the term applied to the hare was Ⲭⲁⲣⲁⲃⲱⲟⲩⲩ, a borrowing of a Persian word meaning literally 'with asses ears'.²⁸

At least four subspecies of Lepus capensis L, the Brown or Cape Hare, were recorded from Egypt by Setzer.²⁹ A sub-Saharan species Lepus crawshayi de Winton may also have occurred in ancient Egypt.³⁰ Darby & Ghalioungui³¹ stated of sh't: 'it is probable that these animals were either hares or wild rabbits'. Rabbits (at least those of the genus Oryctolagus) are, however, not indigenous to Africa, and the rabbits which do occur there today are descended from imported stock.³² Rabbit should not, therefore, be considered as a translation of sh't.

The hare played only a modest role in Egyptian mythology³³ and it appeared once in the Pyramid Texts as a term of abuse.³⁴ Plutarch and Horapollo recorded that its speed and alertness were the reasons for its significance to the ancient Egyptians.³⁵

ṡwṡt (Not in Wb). The skins of a lion and a ṡwṡt are listed together with giraffe-tails and giraffe skins in the Nauri Stela.³⁶ From the orthography it appears to have been a loan-word.

ṡ...m (Not in Wb). Possibly an animal name, being preceded by ḥs 'excrement' in a medical papyrus.³⁷ However, the text is far from clear. The editor did not read a 'cow's-skin' or other animal determinative at the end of the word and the published photographs do not allow the reading to be checked.

ṡspt (Wb IV, 537, 9: Substantiv). This may be an animal name as it has the 'cow's-skin' determinative but the context is so broken as to preclude any serious attempt at translation. Earlier in this text the addressee is compared with a lion; the -k which precedes mṡ ṡsp.t may indicate that this was a similar comparison.³⁸

ṡtbt (Wb IV, 557, 10: Art Tier im Zauber). The term occurs once in the Harris magical papyrus. Lange did not translate it, commenting: 'Die beiden fremdartigen Wörter sind als Tiernamen determiniert. Vielleicht sind sie doch nur magische Wörter'.³⁹ This was also the opinion of Chabas.⁴⁰

ṡt (Wb IV, 559, 1: ein Tier). The word appears only in toponyms, the determinatives of which show a pair of animals. They have been considered to belong to the dog family, but a recent publication of a relief from Giza shows the animals copulating, and they are clearly not dogs but some small desert mammal (compare ḥmt and pṡt, Ch.13); Brovarski suggested: 'Perhaps the ratel or honey badger is intended or some allied genus'.⁴¹

ṡd (Not in Wb). See ḥd (Ch.14); ṡd appears to be a miscopying of this word.

kiry (Wb V, 116, 8-10: ein Tier (aus Nubien), with the note: Wohl identisch mit kṡw, Affe). This word was originally read 'kamaa(1)' by Chabas⁴² and was, therefore, considered to be the antecedent of Coptic καμοογλῆ= 6αμογλ 'camel', demotic gmwl, a loan of Semitic gimel. This reading was rejected by Lefébure⁴³; he transcribed the word kari, which he translated 'mule or wild ass'. Loret translated 'chèvres', comparing Coptic 6(1ε) (1ε).⁴⁴ Wb, on the other hand, compared it with the ancient Egyptian kṡw, which appears with a monkey determinative in a tribute list.⁴⁵ Separately listed from kṡw by Wb, but again similar, is the



term k3yk3y which also shows a monkey determinative and appears on an ostrakon over a monkey watching a child dancing. This may be compared with the almost identical k3k3 also found on an ostrakon.⁴⁶ k1w and k3k3 are, therefore, attested with certainty as the names of monkeys. (For further discussion of these terms see Ch.10: Monkeys).

k1ry is more difficult to identify. It occurs as a personal name⁴⁷ but only infrequently in other contexts.⁴⁸ From these it appears that the k1ry was found in Nubia and understood speech.⁴⁹ It could also be taught to dance.⁵⁰ In another text it appears parallel to the horse (ssmt) and dog (tgm). It is said to be able to carry a mkr (Wb II, 159, 4: Gefäss?) which its mother could not do⁵¹ presumably to emphasize that this was an acquired skill, similar to its ability to acquire the understanding of speech, like the horse's submission to traces and the dog's understanding of orders. Caminos⁵² compared Aelian's record that monkeys could be taught to read and play musical instruments.

Concerning the identification of the k1ry as a monkey the following may be noted: 'The so-called patas "dance", referred to in non-systematic descriptions of captive individuals, is presumably the stereotyped pivoting back and forward on straight limbs that occurs in some caged animals....'; '....it appears.... to be a frustration response in a very active animal'.⁵³ Walker⁵⁴ also noted: 'Captive patas have been observed to express pleasure by dancing on all feet, quite similar to the behaviour of guenons (Cercopithecus)'. The 1b1, hb and 1h3b 'dancing' of the baboon (1'cn and 1my-htt) may also be compared. (See Ch.10).

A reduplicated form k1ry-k1ry occurs in a text from Madâmuḏ. Drioton⁵⁵ translated the phrase in which it occurs: 'Les dromadaires(?) te fêtent (9) avec du bois sepen', which seems difficult to comprehend. The k1ry here appears in parallel with another unidentified animal, kr1w, which is associated with the name of another type of wood (ssdm). Perhaps both were tree-dwelling creatures; this would be consistent with the translation of k1ry as a type of monkey.

k1ry has also been compared with Coptic κελ⁵⁶ and demotic k1.⁵⁷ In one demotic text⁵⁸ its dung smeared on the phallus is said to secure the love of a woman slept with. In another it is said to eat fruit.⁵⁹ Cannuyer⁶⁰ believed these references to indicate that k1 was a baboon, a frugivorous animal noted for its sexual activity, and this was also the opinion of Smith.⁶¹

Wb (Wb V, 116, 10) included under kiry a word spelled kir3 from the Mut ritual recorded in a Berlin papyrus.⁶² This kir3 is mentioned in the context of dancing, but Brunner-Traut,⁶³ in her study of dance in ancient Egypt, was at a loss to explain the extract. It should be noted that the word kir3 also appears in a Brooklyn papyrus describing snakes. (See Ch.19: Reptiles). Sauneron⁶⁴ identified it, from the description given in that papyrus, as a chamaeleon. Whether the Mut ritual contains this spelling in error for the dancing kiry, or whether kir3 could designate an animal other than the chamaeleon (cf dgy-bird and d3gy-bat; sdh-bird and sdh-snake; 3bnn-bird and 3bnn-fish) cannot be deduced with certainty; in any case it seems strange that a chamaeleon could be described as 'dancing'.

There is also a toponym k3r3y/kry⁶⁵ which may be related to this animal name.

knmt (Wb V, 132, 8: ein Tier im Kampf mit Pavianen). As an animal name knmt occurs only once, in the Pyramid Texts, as a creature inimical to baboons.⁶⁶ Sethe⁶⁷ believed the knmt to be a leopard: 'Die in einer großen Herde lebenden Mantelpaviane sind oft von einem einzelnen reißenden Tier knmw.t getötet worden, und manchmal auch wieder dieses durch sie... Dieses nimmt Bezug auf die Feindschaft zwischen dem Pavianen und dem Leoparden, die oft zu erbitterten Kämpfen zwischen beiden Tieren führen, mit wechselnden Ausgang dank der ungeheuren Muskelkräfte und der gewaltigen Zähne der männlichen Paviane.'

The enmity of leopards and certain monkeys is almost legendary and is often cited in zoological works. Kingdon⁶⁸ noted, for example, that: 'During daylight, baboons will unite and chase leopards. On several occasions I have called up the large males of a troop to within a few metres by imitating a leopard's sawing. Kortlandt (1967) has filmed chimpanzees belabouring a stuffed leopard put in their pathway,' and again: 'baboons have been photographed attacking in concert a stuffed leopard, and there are three published accounts of leopards being killed'. This association was also mentioned by Walker⁶⁹ : 'Hamadryas baboons are heavily preyed upon by leopards'; 'Their main enemy is probably the leopard, although several old males are usually a match for this powerful carnivore. An adult male baboon is a powerful and courageous animal'. Schultz⁷⁰ too noted: 'Such terrestrial species as baboons, geladas and some macaques, living in open or nearly treeless regions, congregate at dusk on carefully selected ledges, niches or

even in shallow caves on high rocky cliffs, inaccessible to their most feared enemy, the leopard, which stalks its prey in the dark.'

Rowell⁷¹ has asserted that this position is exaggerated, believing rather that: 'Sometimes, especially on clear moonlit nights, they [the monkeys of a troop] will perhaps spot a leopard moving through the forest, and scream and bark at it... The noise made by an excited or infuriated baboon sounds to us as if it is protesting at being torn limb from limb, and I believe it is such occasions as these which have given rise to the unshakeable myth that leopards prey extensively on baboons. There is no other evidence, at least for central Africa, that any of the cats take any more than the very occasional young straggler' and: 'There were lions, leopards and hyaenas which could have eaten the baboons, but apparently didn't'. Kummer⁷² noted the presence of 'Lions, leopards and cheetahs' near hamadryas baboons in his study area, but no interactions between the species.

A number of the baboon's predators are listed by DeVore and Hall⁷³: 'Life on the ground exposes baboons to predation far more than is true of arboreal monkeys. In East and Central Africa today, and over most of Africa before the expansion of human activity, the predators included lions, leopards, cheetahs, hyaenas, jackals, wild dogs, and raptorial birds.'

From an Egyptological view-point the main objection to the identification of the knmt as a leopard (or indeed lion or cheetah) is that Egyptian already possessed words applicable to these animals. Bj (later 3by) 'leopard' is itself attested in the Pyramid Texts, as well as elsewhere in the Old Kingdom, as is m3j, 'lion'. (For further information see Ch.9: Lions and Other Cats). The same may be said of hyaenas (htt) and jackals (s3b, wns) (See Ch.5: Dogs and Similar Animals).

'Dog' has also been suggested as a translation of knmt. Ember⁷⁴ compared Hebrew keleb, Arabic kalb, Aramaic klb and Assyrian kalbu 'dog' and Mehri koub 'wolf'. This would accord reasonably well with DeVore and Hall's 'wild dogs' (see above); Brehm⁷⁵ too stated that dogs hunted baboons. Sethe⁷⁶ took Ember's proposition into consideration though rejected it: 'Neben dem Leoparden soll der Hyänenhund⁷⁷ der vorzüglichste Feind der Paviane sein, da er aber nur in Rudeln jagt, unser Text aber deutlich ein Einzelwesen voraussetzt, wird der Leopard gemeint sein und zwar ein Weibchen.'

Without additional evidence from ancient Egyptian sources it is difficult to provide an adequate interpretation of knmt, though the translation 'leopard', commonly quoted,⁷⁸ seems unlikely.

kps (Not in Wb). The word, from a Deir el-Medīna ostrakon,⁷⁹ has a 'cow's-skin' determinative and thus may be an animal name; the text is, however, incomplete so this must remain a suggestion.

kn... (Not in Wb). Occurs in the phrase 'excrement of a kn...' in a medical text.⁸⁰ The rest of the word is lost. The phrase was read by Dawson as is kk and translated 'the brain of a kk...'.⁸¹ (See kkt below).

kriw (Not in Wb). See kiry above.

kkt (Wb V, 142, 10: ein Tier). According to P.Ebers⁸² this animal could be prevented from eating corn in a granary by smearing the walls and floor of the granary hr itnw.sn hr mw. Wb. Droq. translated the sentence: 'werde bestrichen seine Wände, seine Fußboden an ihren Löchern (itnw) mit Wasser'. Harris,⁸³ however, understood itnw as 'dung', after Loret.⁸⁴ He rejected Loret's translation of kkt as 'bats' as bats do not eat corn, though neither do the 'geckos' which he proposed because of the onomatopoeic sound of kkt.⁸⁵ It is, of course, possible that the Egyptians believed that the kkt ate corn whereas in fact it did not. Ebers and Stern translated kkt as 'sorex', mouse;⁸⁶ some small rodent pest does seem to be most likely, though it should be noted that elsewhere hf3t 'snakes' are noted in amongst grain.

Dawson considered kkt to have been a 'weevil', in view of the means used to eradicate them,⁸⁷ and it is tempting to compare here Coptic ⲕⲁⲕⲧⲉ 'louse'.⁸⁸ Dawson wondered, too, whether this was the same animal as appears in another medical text; there he read 'the brain of the kk' but decided that kkt must have been a separate word, the brain of a weevil being an impossibly small ingredient.⁸⁹ The Coptic word may well be derived from an entirely different word, kt̃ (not in Wb), which has an insect determinative and seems to have meant 'louse'. (See Ch.20: Insects).

k3dyt (Wb V, 15, 4 : ein Tier). Another term from the medical texts with 'cow's-skin' determinative and thus perhaps an animal. Here its 'insides' (imy) are used to cure an eye-complaint.⁹⁰ The same word may occur in a Deir el-Medīna ostrakon.⁹¹

khḥwt (Wb V, 67, 5: Tiere, die statt Rinder geopfert sind).⁹² Probably not 'instead of' (as Wb) but 'from among' - compare the parallel phrase wšn.n.(i) n.k grw m 3pdw : 'For you I have wrung the necks of gr-geese from among the birds'. Khḥwt, unattested elsewhere, would thus name a type of cattle.

qh (Wb V, 190, 14: ein Tier). From the context, a prescription including the db (horn) of the animal, it seems likely that this word is a miswriting of qhs 'gazelle'. (See Ch.2: Antelopes and Similar Animals).

gsfnw (Wb V, 206, 8: kleines Wüstentier). The gsfnw was identified by Keimer⁹³ as the Cape or Striped Polecat or Zorilla Ictonyx striatus (Perry), and by Aufrere as the Libyan or Saharan Striped Weasel, Poecilictis libyca (Hemprich & Ehrenberg).⁹⁴ Both are striking black and white striped mustelids, the former found throughout the northern and southern African savannahs down to the Cape.⁹⁵ The word occurs over representations of the animal in the sun-temple of Niuserrē at Abu Ghûrâb; in all three named depictions it is giving birth to young.⁹⁶ In one case the name is qualified by ḏ3b, equated by Edel and Keimer with ḏ3b 'stink' (Wb I, 29, 19: Adjektiv und Verbum übler Bedeutung (vom Geruch der Leiche uä)) and taken by them to refer to the foul-smelling secretions of the anal stink glands common to various mustelids and most notorious in the skunk.⁹⁷ Keimer supposed that the name was non-Semitic in origin.⁹⁸

gg3 (Wb V, 208, 8 : ein kleines Tier). From the statue of Djed-Hor; Daressy translated 'un renard?' without justifying the interpretation, and was probably wrong. A much smaller animal seems to be required by the context - cf perhaps pggt. (See Ch.19: Reptiles and Amphibians). (See also snbtt above).

tḏwd (Wb V, 260, 15 : Art Schurz). Like hn and hstt (see above) this word occurs in Old Kingdom clothing lists and may designate a member of the dog or cat family. (See m3g, Ch.13).

tnbh (Wb V, 311, 7-12 : Alt mit einem unbestimmbaren Tier determ... verwirrt sein, bestürzt sein uä). Gardiner⁹⁹ and Vogelsang¹⁰⁰ supposed the determinative to show a hedgehog, though this was rejected by zu Hülshoff.¹⁰¹ The animal drawn has a long tail (in one case) and long legs but does not closely resemble any particular creature.¹⁰²

tk3 (Not in Wb) The term is listed among other animals in the Ramesseum Onomasticon. The k is only partly preserved and the traces would also suit a reading of t3. One is therefore led to compare it with t3 (Wb V, 231, 4: ein Opfertier) attested otherwise as an animal only in Ptolemaic texts. (See Ch.2: Antelopes and Similar Animals, for further discussion).

t3yt (Not in Wb). It follows ṗš3yt¹⁰³ in a medical papyrus and may be another animal name, though it might simply mean 'male' (Wb V, 345, 14-19: ...männlich).

dprm (Wb V, 568, 8: Art böses Tier). This term appears only in the Harris magical papyrus in parallel with another unknown animal, bq (see Ch.13). To render them harmless the text expresses a wish that their mouths be shut; this would put them in a similar class of animals as the lion, jackal and bear against which the same wish is directed in this papyrus. However, the appearance of hwy (see Ch.13) with the animals dprm and bq may indicate that this group was of a different sort. Chabas¹⁰⁴ noted that: 'ce mot a une physionomie araméenne, mais rien ne peut préciser l'animal auquel il se rapporte'. Shisha-Halevy¹⁰⁵ compared the -m ending with the Hebrew plural -im (cf ssmt 'horse' from Hebrew susim 'horses'), the singular form being preserved in a personal name. He noted a similar Hebrew word spir 'young he-goat' and also spr 'bird', though neither of these seems suitable as a translation of dprm.

PART 2 : BIRDS

Chapter 15 : Waterbirds

The birds of ancient Egypt constitute the subject of an extensive recent study by Houlihan and Goodman.¹ A complete list of the species found in modern Egypt is given in their work, among them some 100 water birds,² and many of these species were identified by them from ancient paintings.



Waterfowl were of particular importance to the ancient Egyptians as a source of food, and many terms for these birds can be found in lists of offerings on tomb and temple walls. (The offering lists are so numerous that only exceptional examples will be recorded here). One group of five birds, comprising two species of goose,³ two ducks⁴ and a pigeon, was particularly common.⁵ From the small number of good representations of this group which have survived⁶ it may be ascertained that the species in question were the Greylag Goose, Anser anser (L) (r), the White-fronted Goose, Anser albifrons Scopoli (trp), the Pintail, Anas acuta (L) (st), a brown duck with dark eye stripe and white speculum as yet unidentified (g),⁷ and the Turtle Dove, Streptopelia turtur (L) (mnwt).

The frequent attestation of this group of birds throughout Egyptian history means that the development of variant writings can easily be traced. Some of these writings appear to be mere abbreviations⁸, for example, t, tp or tr for trp, while others may indicate real changes in pronunciations, or, perhaps, the rise to popularity of new species with similar names.


Most confusing among these writings are sr and srw. Wb equated sr (Wb IV, 191, 17-192, 4: Art Gans) with both g (see the Belegstellen to Wb IV, 191, 7), which only appears in the fourth position among the five terms, and with srw (Wb IV, 191, 16: Art Gans and Belegstellen to IV, 192, 4), which in Wb's own examples occurs only as the first term of the five.⁹ The examples of sr recorded by Wb include words occurring in either first¹⁰ or fourth position in the lists, and, occasionally, in neither.¹¹

The writing srw was always rare and did not survive the Old Kingdom, and sr as a variant of r also became less common during this period.¹² However, sr written with the 'bolt' sign (Sign List O34), appeared from the Old Kingdom onwards as a variant of the fourth term, g.¹³ Later this fourth term was also written srt or sry,¹⁴ (compare

also grwt)¹⁵ and is therefore likely to have been the prototype of the grlt equated by Černý¹⁶ with grw, and likewise by Caminos with 'old sr(w) "goose"'.¹⁷ This writing grlt is recorded separately by Wb under grt (Wb IV, 192, 5-7: in der Opferliste für älteres gr). This writing occurs in the name of a goddess who may or may not be associated with the birds in question,¹⁸ but a further attestation shows grt in a list of offerings preceding r.¹⁹

It appears, therefore, assuming the species of the lists to be unaltered, that the terms grw and gr (written ) are variants of r,²⁰ which takes precedence after the Old Kingdom, and that gr and grw (written ) are variants of g,²¹ replacing it entirely from the Middle Kingdom onwards.

The r (Wb II, 393, 1-6: Gans) and the g (Wb IV, 1, 5-6: Art Gans) both occur in contexts other than the offering lists.²² Both birds were kept as domestic animals²³ - the r sometimes appeared separately as a r-dd3 (Wb V, 631, 8: fett Vögel) or r-hpn 'fat(-tend) r',²⁴ r-šd 'reared r'²⁵ (šd could also be used of other birds)²⁶ and hr-ht-n-r 'on-its-belly r' showing a fattened goose²⁷ (cf the use of hr-ht.sn to describe snakes). The phrase 'live r' also appears in offering lists.²⁸ The existence of a r-hd 'white r'²⁹ is further evidence of their domestication, as domesticated animals show albino forms more commonly than wild populations³⁰ (though the r-hd may have been a naturally occurring albino). Wild r from the marshes were also mentioned.³¹ The r appears as an item of payment,³² in a mathematical calculation,³³ as the shape of a loaf,³⁴ once in the medical texts³⁵ and cooked (psd).³⁶ It is compared with the soul.³⁷ The word survived into Coptic as po, 'goose'.³⁸ The g is far less commonly attested outside the offering lists but once occurs in a curse formula.³⁹

The third term of the group of five, usually written st⁴⁰ (Wb III, 407, 16-17: Art Gans oder Ente...Ursprünglich wohl g3.t und das Wort, von dem das Zeichen  seinen Lautwert g3 erhalten hat...), but once written g (for g3?) and once sty,⁴¹ is very well attested.⁴² g3 is also attested in the Middle Kingdom in the same text as st,⁴³ though this may be an entirely separate word. (See Ch.16: Birds of Prey). In the offering lists it shows a variant mst⁴⁴ (Wb II, 136, 4) which may be compared with the similar msyt⁴⁵ (Wb II, 143, 3: Art Wasservogel), once written msrt.⁴⁶ The position of mst/msyt in the offering lists is confirmed in P.Brooklyn 47.218.50 where it appears after the smn (a goose) and before the ʿnt and the mnwt (a pigeon).⁴⁷ A further writing

msw may also denote the same bird.⁴⁸ Msyt and st both appear on jar labels from the same source in the New Kingdom which would indicate that they denoted different species despite the offering list examples where one name replaces the other.⁴⁹

From good representations the st can easily be identified as a pintail.⁵⁰ In one particular instance both male and female pintails are drawn;⁵¹ the females are called st but the males hp (Wb III, 69, 19: Art Ente).⁵² Hp is recorded elsewhere with male pintail as determinative⁵³ but usually male pintails are drawn under the name st.⁵⁴ The terms also appear in connection with the otherwise unattested m3c (Wb II, 24, 8: Art Ente) and šst (Wb IV, 529, 12: Art Geflügel : Ente oä).⁵⁵ The phrase k3w nw st of the Coffin Texts has been taken to mean 'pintail drake' (lit. 'bull of pintails').⁵⁶ This may indicate the date at which hp ceased to be used for the drake. In another, early, text the drake appears to have been termed nb.⁵⁷

The remaining water-bird of the group of five is the trp (Wb V, 387, 6-9: Art Gans oder Ente), the most consistently used and written of the set though, as mentioned above, the abbreviations/variants t, tp and tr⁵⁸ are known. The word has been compared with Coptic 'stumble'.⁵⁹ The trp is shown being fattened⁶⁰ and is mentioned among foodstuffs.⁶¹ It appears twice in the medical texts.⁶²

Hd (Wb III, 210, 9: Art Gans) has already been mentioned as an epithet of r, but some texts show the hd independently, following the trp in offering scenes⁶³; in the tomb of Ti the trp and hd are being fed in the same enclosure.⁶⁴ In other scenes the hd is drawn after the dnw which follows the trp and it is to be concluded from this that it was a smaller or less important bird than these,⁶⁵ though evidently bigger than the smn.⁶⁶

The dnw (Wb V, 575, 4: Art Gans oä) can be seen from the representations to be another goose, similar in size to the hd and trp.⁶⁷ The later word dndn (Wb V, 580, 2: Art Geflügel) should probably be equated with this term because of its similar position in offering lists.⁶⁸ (Compare the forms wn/wnwn, gb/gbgb discussed below). The dndn was identified by Helck⁶⁹ as a swan, an identification later confirmed by Störk. Störk compared the word with Coptic XNXN 'sing',⁷⁰ and noted the voice of the Whooper Swan (C.cygna (L)) or the musical notes made by the wings of the Mute Swan (C.olor (Gmelin)) in flight as supporting evidence for this identification. The Coptic term for the

swan (as recorded by Crum) was merely 'white bird'.⁷¹ Helck⁷² also suggested that the dndn may have been a new species of bird introduced into Egypt in the Middle Kingdom, but given its similarity to the word dnw, it seems to have been identical with the goose of the Old Kingdom. (Compare also the dnd, a duck, discussed below).

Other terms which have been taken as the name for the swan are ḥk (see below), ḥst (see ḥy, Ch.16: Birds of Prey; translated 'swan(?)' by Griffith⁷³ without justification) and nhnt (Wb II, 312, 7: ein Vogel). This latter occurs in a proverbial phrase at el-Amarna: 'Set him there until the nhnt becomes black and the snfrw becomes white' (see further under snfrw, and nhnh, Ch.17: Miscellaneous Birds). Swans were represented a limited number of times in ancient Egypt - these representations were collected and commented upon by Vandier d'Abbadie⁷⁴ - and the bird in question has generally been identified as the Whooper Swan (C.cygnus (L)); Houlihan and Goodman suggested that the Bewick Swan (C.bewickii Yarrell) may also have been known in ancient times.⁷⁵

Another goose, the smn (Wb IV, 136, 2-4: Art Gans), fem. smnt,⁷⁶ surviving in Coptic as CMOYNE⁷⁷, occasionally appears in addition to the group of five birds as offerings, and often occurs in more extensive offering lists.⁷⁸ This bird can be identified from representations as the Nile Goose (Alopochen aegyptiaca (L)),⁷⁹ which was the subject of a detailed study by Kuentz.⁸⁰ In one relief it is described as 'giving birth'.⁸¹ In other texts it is recorded as a bird of the marshes⁸² which could be a pest⁸³ in the fields and in the medical texts⁸⁴ - a domesticated example may appear in the Westcar papyrus⁸⁵ - but is most frequently attested in mythological texts. The deceased could reach heaven in its form.⁸⁶ It is closely associated with Amun⁸⁷ and appears in certain magical ceremonies.⁸⁸ The noise it makes (nqq)⁸⁹ is often referred to; this word is also used as a substantive (Wb II, 350, 13-14: Art Vogel), especially in the phrase nqq wr,⁹⁰ once nq3y wr (Wb II, 349, 9)⁹¹ and it is to be supposed that the nqq and smn refer to the same bird, as the nqq is also associated with Amun.⁹² (For a similar phenomenon see ḥn and htt, Ch.10: Monkeys.) Smn also appears as a personal name.⁹³

A further bird name attested from Old Kingdom offering scenes is gb (Wb V, 164, 5: Art Gans - qbb);⁹⁴ the word appears in a New Kingdom text as gbw.⁹⁵ A form qbb is recorded in a late Old Kingdom papyrus,⁹⁶ and may be the same bird. Gardiner identified the gb (Sign List G38)

as A.albifrons, the White-fronted Goose, taking it to be the determinative of the names of other species of goose and also of 3pd 'bird' which eventually replaced all other determinatives specific to individual birds.⁹⁷ As mentioned above the trp has been identified as A.albifrons but it is difficult to offer a realistic alternative translation of gb while no coloured representations are extant.⁹⁸

Another term to be mentioned here is q33bt (Wb V, 149, 13: Art Vogel) from Beni Hasan.⁹⁹ (The name was read q3mbt by Montet).¹⁰⁰ The bird is almost invisible now though the red bill noted by Wilkinson, Rossellini and Champollion is still visible, and the wing appears noticeably lighter than the bird's body and head; the green wing covert, breast and tail noted previously are still in evidence.¹⁰¹ The bird is not inconceivably a goose (its general shape is goose-like though its colouring is not like that of any goose now found in Egypt¹⁰²); Davies described it simply as an 'Aquatic bird of some sort'.¹⁰³ (For the bird gbq3 see Ch.17).

A number of other words may be identified from the reliefs or texts as denoting waterbirds.

The ht(3) (Wb III, 342, 1: Art Gans oder Ente), known only once from an Old Kingdom context, but frequently attested after this period, was depicted in the tomb of Ti being fed with grain together with various other waterfowl.¹⁰⁴ It was named with other such birds in New Kingdom offering lists,¹⁰⁵ while in the Middle Kingdom it appeared in parallel with the smn as the object of a magician's spell.¹⁰⁶ It was apparently a type of goose, but without coloured representations it is not possible to determine the type.¹⁰⁷

Wb defined few other words as designating geese: stp (Wb IV, 337, 4: Gänse oä), which should probably be read as 'choice examples of' the goose depicted,¹⁰⁸ htm (Wb III, 196, 7-8: Art Gans) and h3r (Wb III, 232, 3-4: Gans oä) both found only in the names of stretches of water in the Pyramid Texts, and Coffin Texts and Book of the Dead.¹⁰⁹ A Late Period word ht (not in Wb)¹¹⁰ may be compared with htm, though its determinative shows a heron-like bird.

A bird named nnt and depicted at Beni Hasan was also identified as a goose by Davies; the bird is not well preserved though was apparently white and has the form of a goose.¹¹¹ Houlihan and Goodman recorded eight species of goose from modern Egypt. Three of these can be

identified from ancient representations as the birds x, trp and smn. Dnw, gb(b), nnt and ht-3 may well also be species designations, though hd, and possibly also hjr and htm, are probably not.

Wrd (Wb I, 336, 17-18: Art Ente oder Gans) appears in a list of birds from the New Kingdom, where it is included among 3pdw-n-mw 'waterbirds'.¹¹² A variant 'yellow-billed' type (wrdw-fnd-n-nwb: Wb II, 239: Art Geflügel; I, 578, 1: 'mit goldener Schnabel' dh. gelbschnäbelig, von einem bestimmten Geflügel) is also recorded,¹¹³ though it would also be possible to read fnd-n-nwb separately as the name of a different type of bird.¹¹⁴ Wrdw (Wb I, 336, 18: auch allgemein für Sümpfgeflügel) were elsewhere associated with Ptah.¹¹⁵ The plural form appears in a list of birds associated with particular stretches of water,¹¹⁶ and here again would appear to denote a particular species. Another text, where these birds are described as 'winged' (dnh, 'tied at the wings'), neither confirms nor denies this.¹¹⁷ In one case wrdw occurs in parallel with rmw 'fish',¹¹⁸ and could thus be taken as a general word for birds, as Wb proposed.

The pht (Wb I, 542, 6: Art Ente oder kleine Gans) var. ph and ptht (not in Wb)¹¹⁹ or hpt (Wb III, 258, 1: Art kleinen Vögel), held a varying position in lists of ducks and geese, often alternating with the pintail (st/hp). The bird was represented several times in the Old Kingdom¹²⁰ as a short-necked duck with a somewhat hunched appearance.¹²¹ It appears from scenes at Abûṣîr to have been migratory to the Delta;¹²² this is a characteristic of a number of small ducks, so does not allow a more specific identification.¹²³

Wb recorded under p (Wb I, 490, 4 : Name eines Vogels) a bird from the offering list in the Festival Hall of Osorkon,¹²⁴ suggesting that the name could be read ph.¹²⁵ Pht (var. hpt) may be the original form of the later word.

The variant writing hpt is to be distinguished from hpw¹²⁶ (Wb III, 259) as the latter is recorded in a text as the prey of peregrines (see bk), which do not take prey as large as ducks.

Another duck, the bsbs (Wb I, 477, 1: Art Gans oder Ente), is shown in one relief with a striking fanned tail¹²⁷ and in another without this characteristic but with a ringed neck.¹²⁸ The word is also attested at Abûṣîr.¹²⁹ Hilzheimer¹³⁰ identified the bird from the reliefs as the White-headed Duck, Oxyura leucocephala, one of the

'stiff-tailed ducks' which has, as the bsbs sometimes does, a characteristically upright posture when on land. Boessneck,¹³¹ on the other hand, identified the bsbs as a Mallard, Anas platyrhynchos. The term may also be read from a fragment of papyrus listing birds' names; the surviving letters bs should probably be completed as bsbs.¹³² The word survived as a designation for a duck into Coptic.¹³³ Bsbs is also preserved as a verb,¹³⁴ as the action of another duck, the wjd-hjt lit. 'green-front', which itself has been identified as a Mallard. The wjd-hjt (Wb I, 270, 1: 'mit grüner Brust' als Name einer Entenart) is depicted with various birds and plants at Beni Hasan¹³⁵ and appears with the same birds in the Coffin Texts,¹³⁶ in a list of provisions for the temple of Amun,¹³⁷ and among birds brought from the marshlands.¹³⁸ Grapow's suggestion¹³⁹ that this phrase designated the Mallard which does indeed seem plausible.¹⁴⁰ The posture of the bsbs shows that it was not a Mallard; the absense of a real ring on the neck of O.leucocephala also calls into question Hilzheimer's identification.

Also to be considered here is the 'green' bird wjd (Wb I, 268, 7: Art Geflügel). The name is attested only once prior to the Ptolemaic period,¹⁴¹ though an wpd wjd (lit: 'green bird') is known from the Pyramid Texts. The wjd appears in an offering list together with mnyt 'pigeon'; it is presumably to be distinguished from the wjd-hjt, but it is difficult to decide what species could be meant by the name 'green'.

A duck with a pronounced upright posture is the wnwn (Wb I, 317, 15: ein kleiner Vogel);¹⁴² the writing wn (Wb I, 307, 10: Art kleiner Vogel) is probably to be deleted.¹⁴³ (For reduplication in another bird name see gb and gbb above.) In one relief (where it is called wnn) its wings are shown in an undeveloped state like those of a chick.¹⁴⁴ Meeks, therefore, translated it: 'un oiseau, ou peut-être une désignation de "l'oisillon", du "poussin"'.¹⁴⁵ It was identified by Schäffer as a coot or moorhen or type of tree duck.¹⁴⁶ Boessneck also identified it as a coot¹⁴⁷ but it lacks the long legs and particular stance of this bird and the similar moorhen (for whft identified as a coot see below); tree ducks do not occur in Egypt or northern Africa and this suggestion should also be rejected.¹⁴⁸

Bd3 (Wb I, 488, 10 : Art Gans oder Ente) is another small bird shown in Old Kingdom tomb scenes.¹⁴⁹ It may be compared with the similarly named bdw (Wb I, 488, 15: Art Kleiner Vogel) represented at Beni Hasan,¹⁵⁰ which Davies could not identify but which Wilkinson named the 'Gutta', the Arabic name for the sandgrouse.¹⁵¹ The bdw has

a reddish collar and may, therefore, be the Pintailed Sandgrouse (Peterocles alchata (L)), now vagrant in Egypt, though no pin-tail is drawn; the Chestnut-bellied Sandgrouse (P.exustus (Temminck)) or the Spotted Sandgrouse (P.senegallus (L)) are also possibilities.¹⁵² A bird named bdw also appears on the reliefs at Abûsîr as a migratory bird in the Delta.¹⁵³ Edel believed it to be a type of pigeon.¹⁵⁴ Sandgrouses are migratory but inhabit arid and semi-desert land¹⁵⁵ so the bdw at Abûsîr may be a different bird, also to be distinguished from the bdj which is certainly a duck.

The sbh (Wb IV, 91, 8: als Name eines Geflügels) is also represented at Abûsîr.¹⁵⁶ Edel¹⁵⁷ identified it as Allen's Gallinule (Porphyrio alleni Thomson), a name already suggested for the ghh at Beni Hasan. The sbh, the name of which doubtless means 'shrieker' (Wb IV, 90, 11-17: schreien), is also depicted in other Old Kingdom reliefs¹⁵⁸. Allen's Gallinule is not particularly noted for its voice; a more suitable 'shrieking' bird of a similar type would be the coot (see also wh't below) or moorhen.¹⁵⁹

The sw (Wb IV, 59, 15: Art Ente) appears in Old Kingdom Tomb scenes¹⁶⁰ and at Abûsîr.¹⁶¹ Edel¹⁶² translated the name 'der Schädling' (comparing Wb IV, 59, 16-17: ...schädlich...). It is not possible to identify the species from the reliefs, though it is presumably to be distinguished from the g (above).

Three more water birds depicted at Abûsîr¹⁶³ were the hrt (not in Wb), the wh't (Wb I, 350, 15 : Art Ente)¹⁶⁴ and the m, not an owl but possibly to be compared with a Late Period word denoting a water bird, im (Wb I, 78, 5: Name eines Vogels).¹⁶⁵

A word hrt occurs in a list of bird names from the Middle Kingdom, following s3 'pintail' and preceding kk. (see Ch.17) and w3st¹⁶⁶ (see below); the term hriw (Wb III, 146, 14: Art eßbares Geflügel), which is mentioned elsewhere with the mst (possibly a later writing of st 'pintail') and the p'rt 'quail', may be another variant writing.¹⁶⁷ Keimer¹⁶⁸ noted that it 'semble être un canard', which, from these contexts, does seem to be the case. The wh't is also depicted at Beni Hasan;¹⁶⁹ Davies identified it as an 'Aquatic bird of some sort'.¹⁷⁰ It is probably a coot, though the bill lacks this bird's characteristic white shield; the shield may appear on other depictions of the wh't.¹⁷¹ However, a bird determinative of imy-r wh't, 'overseer of fishermen' shows a duck of hunched appearance with a pin-tail.¹⁷² Edel translated

(i)m 'der Klagende' or 'Jammervogel', comparing the verb im 'weep' (Wb I, 77, 12: wehklagen, jammern); he suggested that the name was originally applied to the owl, but was later used to describe another bird which 'lamented'.¹⁷³ Unfortunately this does not allow the type of waterbird named by (i)m to be identified.

From a coloured determinative of wš3 'force feed'¹⁷⁴ (Wb I, 369, 2-5: mästen) the bird called wš3t (Wb I, 369, 1: Art Geflügel) in the tomb scenes¹⁷⁵ can be identified as a widgeon (Anas penelope). It also appears in a Middle Kingdom list of birds,¹⁷⁶ and as a form taken by Seth.¹⁷⁷ The term can be restored from the ..št surviving in the tomb of Hetepka¹⁷⁸ (wš3 as a verb is also attested without the 3),¹⁷⁹ though Martin restored mšt. Edel¹⁸⁰ considered this a possible ancestor of Ptolemaic mršt, Coptic mpow; this name he translated 'die lichtrote', which he considered a suitable description of the widgeon (presumably because of the bird's rufous head).¹⁸¹

A few more bird names can be mentioned here as applying to waterbirds. Wj3t (Wb I, 272, 6: ein Vogel) is known from one medical prescription¹⁸² and from the Greenfield Papyrus¹⁸³, with possible plural form wj3yt¹⁸⁴, denoting a bird which was hunted. ḏnd (Wb V, 472, 16: Name eines Vogels) is depicted at Beni Hasan as a bird with a reddish head and white breast.¹⁸⁵ ḏ3n (?) (not in Wb) was noted by Mariette.¹⁸⁶ None of these can be identified with certainty.

A few other bird names may refer to waterbirds, but likewise cannot be identified from the available evidence. The 3mʿ (Wb I, 10, 15: Name eines Vogels) of Beni Hasan¹⁸⁷ may, from its position in the bird and bat scene there, be a waterbird¹⁸⁸ though the reference in P. Edwin Smith¹⁸⁹ to its 'claw',¹⁹⁰ ʿnt (Wb I, 188, 1-7: Nagel, Krallen), might indicate otherwise.

Breasted¹⁹¹ assumed from the second determinative of 3mʿ (two claws) that it was a two-toed bird, but the ostrich is the only two-toed bird and is clearly out of the question here (see n1w for this bird). To Dawson¹⁹² this determinative 'seems intended merely to denote the grasp of any perching bird' and he supposed that the 3mʿ was chosen because of the pun on the 3mʿt (-bone ?) in the text; he believed the bones mentioned in the text to look nothing like a bird's claws.

Davies was unable to identify it from the Beni Hasan picture.¹⁹³ Gaillard devoted an entire article to its identification¹⁹⁴, noting

previous attempts to determine the species - Savi's¹⁹⁵ Larus sp (Gull)¹⁹⁶ and Boussac's¹⁹⁷ Dromas ardeola Paykull (Crab Plover).¹⁹⁸ Gaillard himself identified the bird as Ardetta minuta (superceded),¹⁹⁹ while Jéquier suggested Charadrius melanocephalus (superceded; C.sp are plovers).²⁰⁰

H3bs (Wb III, 230, 9: Art Vogel im Sumpf), var. hbs (Wb III, 257, 1: Art Vogel) has been translated 'diving bird',²⁰¹ from late contexts where it is said to hrp 'sink down or dive' (Wb II, 500, 27-501, 4: untersinken im Wasser, untertauchen; einsinken; unterdrücken) and mh3 'fish' (Wb II, 131, 8-10: durchstossen). Others have suggested more specifically 'cormorant'.²⁰² Prior to these Ptolemaic examples the word is attested in a medical text,²⁰³ where the mouth of a child at the breast is likened to that of h3bsw-birds on the Nile - at a source of plentiful nourishment - and in the Coffin Texts.²⁰⁴ The h3bs is clearly a fish-eating water-bird, but the translation 'cormorant' is by no means certain.

Another bird name translated 'cormorant' (Phalacrocorax carbo (L))²⁰⁵ is 'k (not in Wb). It appears in a punning phrase from the Coffin Texts²⁰⁶ but otherwise only as the phonetic sign for 'k (Sign List G35). Störk²⁰⁷ identified the bird of the hieroglyph as a Finfoot (Podica senegalensis Vieillot) after Boussac,²⁰⁸ though its hooked bill - and its current distribution - would better suit the original suggestion.²⁰⁹

The irtdr (Wb I, 116, 16: Art Vogel) is known only from a single text concerning fowling in the marshland, in an unfortunately rather broken context.²¹⁰ It is not possible to suggest a more precise translation than 'type of water bird'; Wb commented 'wohl Fremdwort',²¹¹ presumably because of the 'syllabic orthography'.

H3yt (Wb III, 16, 1 : Art eßbares Geflügel) appears in a text which mentions a number of other birds: wrdw, mst, p'rw and hriw.²¹² The whole text is concerned with a description of Memphis, and, in the passage, with the sort of foodstuffs which may be found there. wrdw and mst can be identified as ducks/geese (see above); the p'rw has been identified as the quail, though no absolute proof for this exists (see Ch.17: Miscellaneous Birds). Hriw is found only here, so cannot be translated, but was evidently an edible water bird. H3it, probably a variant of Wb's h3yt, appears on a papyrus fragment together with other bird-names.²¹³ The phrase hr h3yt 'the face of a h3yt-bird' is found in

the Chester Beatty dream papyrus,²¹⁴ but this may be a variant writing of a different word. In the following line of this papyrus, the dryt is mentioned;²¹⁵ the dr(y)t, a bird of prey, was often associated with Isis or Nephthys (see Ch.16: Birds of Prey) and was sometimes accompanied by another bird of prey, the h3t. H3t also appears to have been the name of a water-bird, possibly a tern.

It seems therefore that h3t and h3yt named both a bird of prey, often associated with Isis, and a type of water-bird which was found in the Delta and was eaten (birds of prey were not eaten). H3yt was apparently the later writing (cf msyt for earlier ms above). The writings h3y and h3yw apparently apply to the bird of prey, but are to be differentiated from h3w, which may therefore denote the water-bird. Both names may have arisen from the birds' cry (cf Wb I, 6-7, 4: klagen).

Despite the similarity of their names, the determinatives of bn (Wb I, 457, 2-4: Art Vogel (Bachstelze?)) and bnw (Wb I, 458, 3-5: der Phönix) have been identified as depicting different birds - a wagtail²¹⁶ and a heron²¹⁷ respectively.

The bn seems to occur only as a phonetic sign, and is not used as the name of a species²¹⁸; bnw, on the contrary, is frequently attested. It has been suggested that this bird was a purely mythological beast, because of difficulties in identifying representations with any living species, but certain textual references, notably the use of the bird's plumes as an amulet,²¹⁹ indicate otherwise. The bnw is mentioned together with other bird names as one of the forms which might be adopted by the souls of the deceased,²²⁰ as these other bird names are attested elsewhere as the names of species it may be inferred that the same was true of the bnw. The term should, therefore, be translated '(type of) heron' (probably the Grey Heron, Ardea cinerea L) rather than 'phoenix', which has overtones of a different sort. Nevertheless, the phoenix legend may well have had its origins in the ancient Egyptians' associations of the bnw with the sun and planets and ideas of eternity.²²¹

The bnw was most closely connected with Rē²²² and his place of worship, Heliopolis (especially the area of Heliopolis called hwt-bnw).²²³ It also had close associations with other places and deities, notably Herakleopolis²²⁴ (but also elsewhere)²²⁵ and Atum²²⁶, Osiris²²⁷, Amun²²⁸, Hathor²²⁹, Horus²³⁰ and Anubis²³¹; a deity in the

Underworld was also called byn.²³² The bnw was mentioned in association with a particular tree²³³ and with the Nile²³⁴. It was described as 'the sacred bnw whose name is hidden'²³⁵ and 'great god'²³⁶, and was worshipped independently in its own form;²³⁷ a spell against its legs appears in a papyrus cursing various gods.²³⁸ A bnw of wax was included together with the four sons of Horus in a mummy's wrappings²³⁹ and its form was used to decorate scarabs and amulets.²⁴⁰ The bnw also gave its name to a constellation,²⁴¹ and appeared in the personal name bnwiw.²⁴²

Four more birds written with a heron-like determinative were the šnty²⁴³ (Wb IV, 519,1: Art Reiher),²⁴⁴ the nw (Wb II, 217,15: Name eines Vogels), var. nwr (Wb II, 223,5: Art Vogel),²⁴⁵ the h'w (Wb I, 222, 11: Name eines reiherartigen Vogels)²⁴⁶ and the it-h3' (Wb I, 142, 9: 'Vater des kleinen Kindes' als Name eines Vogels).²⁴⁷ Compare too the nm (Wb II, 263,5: Name eines Vogels), the rd (Wb II, 463, 12: Art Vogel) and possibly also šm (Wb IV, 462,4: Name eines Vogels), from the 'festival hall' of Osorkon,²⁴⁸ all of which show heron-like birds as determinatives. Two further words, hy (Wb III, 136, 13: in den Namen von Stern-göttern) and dīwty (Wb V, 421, 6-7: Vogel mit Federn am Kopf in einer Götterprozession) were also written with herons as determinatives.²⁴⁹

In one of the Coffin Texts the nwr is described as šnty²⁵⁰ (not in Wb; translated 'lotus-haunting' by Faulkner)²⁵¹ which itself appears as a bird name elsewhere in these texts.²⁵²

Houlihan and Goodman²⁵³ recorded from modern Egypt twelve members of the family Ardeidae (herons and allies).²⁵⁴ Bnw, as seen above, may be identified as Ardea sp, and various birds identifiable with the smaller herons are given below. šnty, nw(r), h'w and it-h3' are perhaps, therefore, to be identified as egrets (Egretta sp) (note especially the 'cricked' necks of some species), though h'w 'the stander' and it-h3' 'father of children' may be descriptive rather than specific names. The nwr, depicted in a naturalistic setting in the Unas causeway, somewhat resembles one of these birds.

Another of the herons, the Night Heron, may be definitely identified from Egyptian paintings;²⁵⁵ at Beni Hasan it is named rš[3]w²⁵⁶ (Wb II, 399,3: ein storchartiger Vogel), more recently read (probably mistakenly) as š3w alone.²⁵⁷ The k3pw (Wb V, 105, 2: Name eines Vogels), which is also depicted at Beni Hasan,²⁵⁸ was identified

by Davies as a Bittern (*Botaurus stellaris* (L)),²⁵⁹ though it could also be a Squacco Heron (*Ardeola ralloides* (Scopoli))²⁶⁰, the name has been compared with Coptic ΚΑΤΑΙ.²⁶¹ The sd3 (Wb IV, 365,12: die Rohrdommel)²⁶² has likewise been translated 'bittern' (Wb), though also 'egret'; the shape of the hieroglyph resembles that of the Great White Egret (*Egretta alba* (L)).²⁶³ Another bird to be considered here is the hnt²⁶⁴ (Wb III, 105,8: Name eines Vogels), again represented at Beni Hasan; it has been identified as a kingfisher,²⁶⁵ but its legs are too long and it would be better compared with the Little Bittern (*Ixobrychus minutus* (L)).²⁶⁶

Three ibises have been recorded from modern Egypt: the Sacred Ibis, *Threskiornis aethiopicus* (Latham), last reliably noted there in 1877, the Glossy Ibis, *Plegadis alcinellus* (L) and the Hermit Ibis, *Geronticus eremita* (L).²⁶⁷ Four terms for ibis species are recorded by Wb: hb (Wb II, 487, 1-4: der Ibis), gmt²⁶⁸ (Wb V, 166,5: der Vogel, den das Schriftzeichen darstellt: der Ibis), thn (Wb V, 326,25-27: der Ibis) and 3ht (Wb I, 18,12-13: Name des Vogels (*Ibis comata*)²⁶⁹).

The 3ht and gmt are easily identifiable as the Hermit Ibis (from the 'ruff' shown on the hieroglyph)²⁷⁰ and the Glossy Ibis (from the characteristic posture of the bird well represented in the sign)²⁷¹ respectively. Both names have been compared with verbs - gm (Wb V, 166,6-169,8: finden) and 3h (Wb I, 13,7-14,25: herrlich sein, trefflich, nützlich). These etymologies reflect the Glossy Ibis' habit of probing mud to find food²⁷² and the metallic sheen on the plumage of the Hermit Ibis.²⁷³ Neither name is common; the 3ht is not named in a naturalistic setting (though two Hermit Ibises on stands are labelled 3ht)²⁷⁴ but the gmt is depicted at Abûsîr²⁷⁵ among birds flying to the Delta. The Glossy Ibis does indeed winter in Egypt and the surrounding areas.²⁷⁶ The name also appears on a papyrus fragment.²⁷⁷ The 'uniform, almost black plumage'²⁷⁸ of the gmt was taken by the ancient Egyptians as a metaphor for dirtiness.²⁷⁹

Like the gmt the thn is depicted at Abûsîr.²⁸⁰ It was identified by Edel as the Wood Ibis or Yellow-billed Stork, *Mycteria ibis* (L),²⁸¹ widespread in Africa south of the Sahara, though thn has elsewhere been taken as a designation for the Sacred Ibis, like hb.²⁸² In Ptolemaic texts thn is applied to Thoth²⁸³ and this has been the chief reason for translating thn as 'Sacred Ibis'.²⁸⁴ Prior to the these texts thn occurs only once in this context,²⁸⁵ though the word is attested a number of times in the Pyramid Texts.²⁸⁶ The name has been compared

with thn 'pierce, break through', perhaps referring to the bird's feeding habits (cf gmt above).²⁸⁷

Hb (Coptic ⲭⲓⲃⲱⲓ)²⁸⁸ does not appear before the New Kingdom, though certain references (for example, in the Instructions of Amenemope²⁸⁹ and in the medical texts)²⁹⁰ may indicate its existence at an earlier date. It appears most frequently in association with the god Thoth,²⁹¹ who could take the form either of an ibis²⁹² or of a baboon (see Ch.10: Monkeys) and also occurs in lists of animals associated with deities.²⁹³ References to a man's fingers²⁹⁴ or actions²⁹⁵ being like those of an ibis doubtless refer to the wisdom of Thoth. The name may be derived from a root hb 'to step' and refer to the Sacred Ibis' stately gait.²⁹⁶

Representations of Thoth as an Ibis leave no doubt that hb designates the Sacred Ibis. It may be that thn also designated this bird,²⁹⁷ with hb taking precedence after the Old Kingdom and surviving into Coptic.

Only two species of crane²⁹⁸ are found in Egypt today, the Common Crane, Grus grus (L), and the Demoiselle Crane, Anthropoides virgo (L).²⁹⁹ Both may be distinguished among the birds depicted in ancient tombs as food offerings, the first from its red crown³⁰⁰ and the latter from its white head tufts.³⁰¹ They bear the names d3t (Wb V, 516, 9-13: Art Kranich)³⁰² and wd (Wb I, 407, 14: der graue Kranich) respectively.³⁰³

Two other species of crane, the Wattled Crane, Buggeranus carunculatus Gmelin, and the Sudan Crowned Crane, Balearica pavonina L, are found in East Africa; neither is found north of 20°N³⁰⁴ and neither can be identified from Egyptian reliefs and paintings.³⁰⁵ Nevertheless, two further designations were applied to cranes in ancient Egypt: lw (Wb I, 170, 3: Art Kranich)³⁰⁶ and q3 (Wb V, 149, 8: Art Reiher).³⁰⁷ Owing to the existence of one example where lw (written lw) immediately follows d3t³⁰⁸ Montet³⁰⁹ believed lw to be 'qu'une epithète qui qualifie une variété de l'espèce ⲭⲓⲃⲱⲓ. Entre les oiseaux qui portent ces deux noms il n'y a d'autre différence que la couleur'. In the tomb of Ptahshepses at Abûsîr the d3t has blue legs and plumage with red feet, while the d3t lw has pale blue plumage and dark blue feet.³¹⁰

The colouring of cranes was mentioned by Junker³¹¹ when discussing examples from the Mastaba of Iy. He dismissed the presence of red colour on the feathering of the d3t and wd as an error on the part of the painter: 'Wir hätten also unter d3t nicht nur den schwarzen, sondern auch den roten Kranich zu verstehen' (though what he means by 'black' & 'red' cranes is unclear) - 'das will freilich nicht zu den feinen Unterscheidungen passen, die der Ägypter bei den Tierarten macht.' On these points note the brownish/reddish feathers which do appear on the back of the common crane;³¹² these colours were presumably transferred in error onto the demoiselle crane depicted in this mastaba. The colour differences noted by Montet seem insignificant; red feet are not, in any case, present on any species of crane. Junker³¹³ suggested for Qw in this instance 'vielleicht die Bezeichnung des Männchens'.

With no further information available it is difficult to see how to translate w and g3; though they are obviously different from the wd their similarity in form to the d3t (and dissimilarity to other East African cranes) would tend to lead to the conclusion that these terms too applied to what modern zoologists see as a single species, Grus grus.³¹⁴ The names applied by the ancient Egyptians to cranes thus provide valuable evidence for 'overdifferentiation' in their classification of animal species (see also Ch.18: Fish).³¹⁵

The only one of the terms for cranes to survive the Old Kingdom was d3t, which continued to be common in offering lists and elsewhere,³¹⁶ for example, in ritual³¹⁷ and as a good omen in a dream.³¹⁸ This crane was also associated with the soul of the deceased on his ascent to heaven.³¹⁹ By the Coptic period a separate term for crane had been lost; instead ⲉⲩⲱⲙⲓ and ⲧⲓⲥⲓ, from Egyptian dšrt 'flamingo', were used to denote this bird.³²⁰

Two water-birds were adopted as hieroglyphs, the p3³²¹ (Wb I, 410, 10: der Vogel, den die Hieroglyphe darstellt) and the dšr³²² (Wb V, 487, 9: der Flamingo, den das Schriftzeichen darstellt). The dšr is easily identified as the (Greater) Flamingo, Phoenicopterus ruber L,³²³ still found in Egypt today,³²⁴ from detailed examples of the hieroglyph³²⁵ and from the name itself meaning 'red' (Wb V, 488, 1 - 490, 13: rot, rot sein).³²⁶ As a bird name dšr is attested in a list of words,³²⁷ in the Book of the Dead³²⁸ and in the Coffin Texts³²⁹ where it varies with the otherwise unknown term, šbd, var. šbdd (not in Wb).³³⁰ B3, on the other hand, does not occur used as a bird name,

though it undoubtedly did originally designate the bird represented by the hieroglyph. It was identified by Keimer³³¹ as the Saddle-billed Stork, Ephippiorhynchus senegalensis (Shaw), sometimes known as the Jabiru (Stork),³³² though 'jabiru' should properly be applied only to the South American stork Jabiru mycteria. The Saddle-billed Stork does not occur in Egypt today, but is found in the Sudan and in all but the most southerly parts of sub-Saharan Africa.³³³ Early hieroglyphs represent the position of this bird's wattle accurately,³³⁴ though by the New Kingdom this has migrated to the base of the neck.³³⁵ The colouring of later hieroglyphs is, however, reasonably accurate.³³⁶ Comparison with Coptic ⲃⲁⲓ,³³⁷ 'night raven', 'screech owl', led to a delay in the correct identification of the ḥj; dḥr is also preserved with a different meaning in Coptic, as ⲉⲧⲏⲩⲩⲓ 'crane'.³³⁸

A number of other water-birds appear in named representations, for example:

ḥnhbt (Wb I, 193, 1: Name eines Vogels),³³⁹

bnq (Wb I, 464, 4: Name eines Vogels)³⁴⁰

mrwryt (Wb II, 109, 10: ein Vogl),³⁴¹

hnt (Wb III, 104, 2-3: der Pelikan)³⁴²

- compare perhaps hn (Wb III, 104, 1: ein Vogel)³⁴³

hrt var. hrt (not in Wb),³⁴⁴

hry (Wb III, 396, 7: als Name eines Vogels),³⁴⁵

shh (Wb IV, 220, 19: Name eines Vogels)³⁴⁶

- compare sh (Wb IV, 209, 8: Art Vogel)³⁴⁷

and, similarly, the bird name in the phrase dw-shsh,³⁴⁸ which appears from the length of its bill in the hieroglyph, to be another species

sdh (Wb IV, 394, 5: als Name eines Vogels)³⁴⁹

- compare sth (Wb IV, 345, 1: Name eines Vogels)³⁵⁰

krj (not in Wb),³⁵¹

tnt (Wb V, 313, 7: ein Vogel),³⁵²

tfnyt, which glosses another bird-name sft (Wb IV, 118, 9: Art Vogel),³⁵³

dqyt (Wb V, 499, 5-6: als Name eines kleinen Vogels (ob: der Regenpfeifer?)),³⁵⁴ var. drqyt (Wb V, 478, 4),³⁵⁵

dms (Wb V, 574, 13: Art Vogel).³⁵⁶

Of these hnt 'Pelican' is the most common, being attested a number of times in mythological contexts,³⁵⁷ as well as in the medical texts.³⁵⁸ The mrwryt, identified from the Beni Hasan depictions as a Black Stork (Ciconia nigra L), may also appear in a mythological text

as the mrwy whose wings are attached to the prow of a boat ³⁵⁹ (see also 'w', Ch.17, which may be a similar bird).

The 'nhbt and dms are identifiable from the representations as the Pied Kingfisher³⁶⁰ and Avocet³⁶¹ respectively. The hry may be a type of plover³⁶² and the shh a gallinule.³⁶³ Tnt evidently named the Spur Winged Plover³⁶⁴ and sdh the Little Ringed Plover,³⁶⁵ while d(r)qyt appears to have denoted the Painted Snipe.³⁶⁶ The other birds are as yet unidentifiable.


Chapter 16 : Birds of Prey

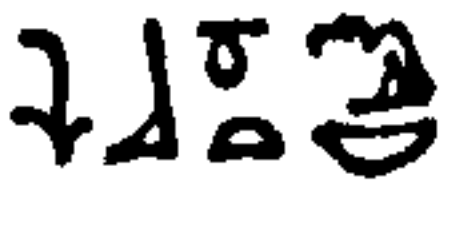
Houlihan and Goodman recorded 47 species of birds of prey from present day Egypt,¹ and a few of these can be recognised from ancient Egyptian records.

Five birds of prey appear as hieroglyphs : 3 (Sign List G1, cf G2-3), m (Sign List G17, cf G18-20), nr (Sign List G14, cf G15-16), tīw (Sign List G4) and Hr (Sign-list G5 cf G6-G13). These have been identified as the Egyptian Vulture, Neophron percnopterus (L);² The Barn Owl, Tyto alba (Scopoli) (among others);³ the Griffon Vulture Gyps fulvus (Hablizl),⁴ the Long-legged Buzzard Buteo rufinus (Cretschmar),⁵ and the Peregrine Falcon, Falco peregrinus Tunstall,⁶ respectively.

Both 3 (Wb I, 1, 1: der weißköpfige Geier⁷) and nrt (Wb II, 277, 1-3: der Geier) appear in the texts as the names of birds,⁸ but whether m was also the name of the owl(s) depicted is a matter of some debate.⁹ There is no evidence to suggest whether or not tīw was the name of the buzzard of the sign, though 3 and m were undoubtedly onomatopoeic names¹⁰ and the same may be true of tīw. Hr was not the name of the 'Horus' falcon; numerous references indicate that the bird in question was named bīk.¹¹

Of these words only nrt is very common. The term is found several times in the medical texts.¹² Their bones and feathers are mentioned elsewhere¹³ and the deceased could fly to heaven in their form.¹⁴ Vulture heads on a collar¹⁵ and vulture figures as amulets were also named nrt;¹⁶ a 'vulture of gold' also appears in this context.¹⁷ This bird was closely associated with the goddesses Mut and Nekhbet¹⁸ and possibly also Rē.¹⁹

After the Middle Kingdom writings with final (apparently feminine) t become less common; t is replaced by īw. (In some of the latter cases the word may be confused with masculine nīw, 'ostrich'.²⁰) This form recalls Coptic writings,²¹ which may be either masculine or feminine. Westendorf concluded of the Coptic: 'Das weibliche Wort bezeichnet also den Geier beiderlei Geschlechts. Dazu erinnert Sethe daran, daß nach ägyptischen Glauben (Horapollo I, 11) nur weibliche Geier existieren'.²² On this idea Keimer also commented: 'Presumably to be connected with this idea [that vultures are all feminine] are the facts that from primitive times the vulture  was conceived to be

the animal of  Nhbt of El-Kâb, the patron goddess of Upper Egypt, and furthermore that the same vulture hieroglyph was used to determine the word for 'mother' (mwt) and the name of the great Mother-goddess (Mwt) of Thebes, the consort of Amun'.²³

The only named birds of prey depicted in a naturalistic setting are the bîk (Wb I, 444,13-445, 8: der Falke)²⁴ and the tnhr (Wb V, 384,12: Art Falke).²⁵ They are both shown nesting (the nest of a bîk is also mentioned elsewhere).²⁶ Tnhr occurs only in one other text, the tale of the Eloquent Peasant,²⁷ so an identification of the species is difficult. Edel presumed it was one of four species of falcon now breeding in Egypt. The Eloquent Peasant text notes that the tnhr preyed on other birds; this would allow it to be identified as a Lanner or a Sooty Falcon.

As has been mentioned the bîk is the bird associated with Horus, and designates the Peregrine Falcon. This falcon feeds chiefly on smaller birds, a characteristic mentioned a number of times at Medinet Habu, where the king (or his horse) among his enemies is compared with a peregrine among the šf(n) (Wb IV, 445,3: Art kleiner Vögel; Wb IV, 460,3: Art kleiner Vögel) or hpt (Wb III, 258,1: Art kleiner Vögel; Wb III, 259).²⁸ Many other metaphorical expressions describe the king as a bîk,²⁹ divine bîk³⁰ or bîk of gold.³¹ Various deities also appear with these appellations.³² In addition Hathor was described as a bîkt.³³

In the underworld the deceased could assume the form of a bîk in order to travel heavenwards or go about during the day.³⁴ Bîk and smn (the bird associated with Amun) appear together in this and similar contexts.³⁵ Bîk also appears in the Coffin Texts in descriptions of a fishing net,³⁶ and is associated with the shoulders (mnwy) in a medical text.³⁷ The bîk had a place in ritual³⁸ and magic,³⁹ and falcon-shaped amulets,⁴⁰ like collars in the form of falcons,⁴¹ were designated bîk.

In a number of texts bîk appears in parallel with gmhsw (Wb V, 172,1-6: Art Vogel (Raubvogel)).⁴² The vast majority of references to gmhsw are from Ptolemaic texts⁴³ and Junker⁴⁴ believed gmhsw at this date to be the name given to sacred falcons or cult images of the god Horus. In earlier texts the gmhsw is associated with Sokar. The 'falcon (gmhsw) who sees the rudder' in the Cairo Calendar⁴⁵ may be compared with the 'gmhsw upon the evening bark' of Theban Tomb 30⁴⁶ describing Ptah-Sokar-Osiris (cf Sign List G10 'falcon on a special sacred bark' as determinative of the name of Sokar). Gmhsw also appears on an

ostrakon preserving part of a sun hymn.⁴⁷

In two of the texts in which bīk and gmḥsw occur together šnbty (Wb IV, 514, 1-4: ein Raubvogel: Falke) also appears.⁴⁸ This term is elsewhere applied to Horus,⁴⁹ and to a falcon-shaped amulet.⁵⁰ Like gmḥsw it is more common in Ptolemaic texts.⁵¹ Its usual determinative was described by Gardiner as an 'archaic image of a falcon'.⁵² One of the texts containing these three words gives different determinatives for each; though each describes the sun-god the juxtaposition of the words seems to indicate a clear distinction between them.

It is evident that by Ptolemaic times gmḥsw was synonymous with bīk,⁵³ and both gmḥsw and šnbty at that date were applied to Horus in the same way as bīk. Altenmüller⁵⁴ suggested that the different terms corresponded to different depictions of falcon deities : 'Als heiliges Tier...: seit der FrZt in unterschiedlicher Haltung dargestellt, als aufgerichteter F[alke] (bīk) , als lauernder F. (šnbty) oder als mumifizierter F. (ḥm, Achom) , seit MR auch mit ausgebreiteten Flügeln (Dunanui)'. Nevertheless, bīk may also show a 'cowering falcon' determinative,⁵⁵ so the distinction may be more complex than Altenmüller allowed.

Like Horus and Mut, Isis and Nephthys also took the form of birds of prey. In their functions as mourners at the bier of the deceased (as Osiris)⁵⁶ these birds are both depicted and named. When depicted the birds are drawn alike;⁵⁷ in the texts, however, although both may be described as drt⁵⁸ (Wb V, 596, 2-8: ein Raubvogel: der Falke, die Weihe oä), especially as drt wrt and drt ndst,⁵⁹ Isis' bird may be designated h3t (Wb III, 7, 8: ein Vogel).⁶⁰ Houlihan, from various representations of Isis as a bird, identified two species, both the Black Kite, Milvus migrans (Boddaert), and the Kestrel, Falco tinnunculus L or Lesser Kestrel, F. naumanni Fleischer. Neither of these identifications is entirely satisfactory.⁶¹

H3t also appears as the name of a bird in a relief at Abûṣîr, in the sun-temple of Niuserrē.⁶² The bird depicted here has a long bill, as it does in another relief from the Unas causeway,⁶³ and forked tail, and was identified by Edel as a tern⁶⁴ ('Seeschwalbe'). H3t also occurs on a Middle Kingdom sarcophagus between three dressed ducks and a pintail, though it is probably not a bird name here, but a writing of h3t 'food' (Wb III, 12, 22: Speisen oä).⁶⁵ Similar forms h3y and h3yw (Wb III, 16, 2: Bez. der Raubvögel) are also attested; in the former case⁶⁶

Isis is referred to, in the latter⁶⁷ the conquering pharaoh is likened to h3yw among a multitude of birds. The determinatives in the latter text are unusual - both h3yw and 3pd 'bird' have the 3 as determining sign. This sign is also found as a determinative of drt, and Isis and Nephthys depicted as birds of prey sometimes appear very like the 3-hieroglyph in shape. H3yw also has a knife (Sign List T30) as determinative, which would seem appropriate for a bird of prey. H3y is attested in addition in the Coffin Texts, and is apparently to be distinguished from another bird name h3w.⁶⁸ H3t is also attested here,⁶⁹ and a form h3yt, recorded among the names of various edible birds, appears in a New Kingdom document.⁷⁰ (See also Ch.15: Waterbirds for these words).

The drt appears to have been regarded as a vicious scavenging bird,⁷¹ eating carrion⁷² as well as mice,⁷³ though it could be 'mastered',⁷⁴ like the b1k. This Keimer took to be a reference - the only one in Egyptian texts - to falconry.⁷⁵ The drt is twice referred to as being 'in the sky',⁷⁶ - this seems to have been its typical habitat (as the desert was for jackals); the bird's flight heavenwards is alluded to in the Pyramid Texts.⁷⁷ It appears in parallel with other types of bird, among them the b1k and smn.⁷⁸ A writing dr1 also occurs in love-songs,⁷⁹ and in the medical texts the bird appears in the rôle of a scapegoat.⁸⁰

A form drty (Wb V, 597, 5-12: Art Falke; Wb V, 597, 13-14: das Falkenweibchen) is also occasionally found, though it is applied to Horus, to the pharaoh or to a Nile god.⁸¹ These texts are late in date; like gmhsw and šnbty, drty seems to have been synonymous with b1k.

Drw (Wb V, 601: Vogel, Raubvogel, cf Wb V, 596, 1: Art Vogel in einem Vergleich) in the phrase drw n š3 from the Book of the Dead⁸² should perhaps also be included here, though this is not otherwise attested as a writing of drt. (Compare however the Coptic form ṛpe).⁸³

It can be seen from the above texts that the drt (var. drw, dr1) was noted for its wailing cry, its scavenging, eating mice and frequenting watery habitats. It could, perhaps, be trained. In all these characteristics it resembles the Black Kite (Milvus migrans).⁸⁴ H3t (var. h3y, h3yw) also clearly denotes a bird of prey. It may be distinct from the h3t as depicted at Abûšîr and the Unas causeway though this bird's forked tail and fish-eating habits are also found in the Black Kite.⁸⁵ As noted above it is difficult to identify the birds

of Isis and Nephthys from representations in tombs and on papyri but, when depicted, the birds are always of the same species. From this and the texts it may be deduced that both h3t and drt applied to the Black Kite; h3t may have been a descriptive name, 'screecher', also appropriate to other species (such as a tern).

The hy-bird (Wb I, 224, 11: Name eines Vogels) appears in one text as an insect-eating bird.⁸⁶ In another, Isis speaks of herself as both an hy and a drt.⁸⁷ The hy and the blk appear together in a medical text,⁸⁸ and ht (again like blk) is used of the king.⁸⁹ These attestations indicate that hy was a similar species. That it is described as 'striking' suggests that it was a bird of prey.⁹⁰ It is also mentioned in connection with watery places⁹¹ - compare the drw n 33 - and as being restless.⁹² A keeper (33w) of hy (written hw) is also known.⁹³

In another text the term appears to have a more general meaning, seeming to designate 'birds' as a class.⁹⁴ Sauneron compared the term with hl 'voler';⁹⁵ another word with a similar etymology and a broad meaning is p3yw (see Ch.1: Classification). Both the specific and the general meanings of hy are found in New Kingdom texts; the presence of hy in the medical texts apparently denoting a species might indicate that this was the older use.

Other terms which have been translated with the names of birds of prey are 3s (not in Wb)⁹⁶ and dt3t (Wb V, 618,8 : Geier).⁹⁷ Both may be vultures, though in one case 3s has a determinative unlike a vulture.⁹⁸ Also possible as the name of a bird of prey is s(i)3 (not in Wb);⁹⁹ this bird, like blk¹⁰⁰ and tt-mrwy,¹⁰¹ appears on the prow of a boat.¹⁰²

No term is preserved which may be translated 'eagle',¹⁰³ though it has been asserted¹⁰⁴ that Coptic¹⁰⁵ used the ancient term hm, (Wb I, 225, 15-226, 5: Götterbild... der Falke)¹⁰⁶ to designate this bird. The expression 'feather of an hm'¹⁰⁷ indicates that it was a living species. According to Ember, the word may be descended from a Semitic root.¹⁰⁸

Chapter 17 : Miscellaneous Birds

As has already been mentioned in Ch.15, mnwt (Wb II, 72; Wb II, 79, 3-4: die Taube) is very frequently attested in offering scenes and lists from tombs and temples, appearing most often in a group of five birds with two geese (r, trp) and two ducks (st, s). From named representations of the bird mnwt¹ it may be identified as the Turtle Dove, Streptopelia turtur (L).² Although mnwt³ is the most common writing of the name of the bird, mnt⁴ and mnw⁵ are also attested. Mnwt (once as mnt)⁶ also occurs many times in longer lists of birds destined as offerings.⁷

Similar lists are known which separate ducks and geese (summarized as (3pdw)n mw: 'water-birds') from other birds; here the writings mnt,⁸ mnit⁹ and mnw¹⁰ are attested. Mnyt (Wb II, 77) also appears in another list of offerings.¹¹ The form mnw is recorded separately by Wb (II, 79, 5: Art Vogel) among a list of goods transported by the 'Eloquent Peasant'.¹² Mnit is recorded by Spiegelberg in a list of birds on an ostrakon from the Ramesseum;¹³ Gardiner¹⁴ supposed mnit and mnyt to be either variants of mnwt or writings of a separate term altogether. The latter appears to be disproved by the examples noted above.

In P.Ebers the writings mnt and mnyt once occur in the same prescription (note that mnt was corrected from mnyt).¹⁵ This is the only occurrence of mnyt in the medical texts though mnt is attested several times;¹⁶ mnwt is not attested in these texts. Wb.Drog translated the terms 'die Taube' (mnyt) and 'die Schwalbe' (mnt) respectively.¹⁷

Mnt with swallow determinative¹⁸ (Wb II, 68, 2-4: die Schwalbe) is frequently attested in mythological contexts. It was associated with Rē¹⁹ (Greco-Roman sources rather indicate a connection between Isis and the swallow),²⁰ it appeared in the underworld texts²¹ and was one of the birds into which the soul of the deceased might change in order to travel heavenwards.²² It occurs in a love song as the herald of the dawn.²³ Swallows were revered at Deir el-Medîna²⁴ and mummified examples have been found near Thebes.²⁵ Mnt is also attested as a toponym²⁶ and as a personal name.²⁷ Another writing of the word can be found above a representation of two swallows in the papyrus of Panebenkemetnakht where stands the word mnit.²⁸

It is abundantly clear from the above that there was considerable similarity between the various forms of mnwt and mnt. Mnw and mnwt, as is indicated by their presence in lists of food offerings, almost exclusively designate a dove.²⁹ Mnt and mnit, on the other hand, may be used to designate either the swallow or the dove, and there seems little point in postulating, as Gardiner did, the existence of a third bird designated mnit. The mnyt of P. Ebers causes a problem in that the word with which it appears, mnt, can apply to either the dove or the swallow. Since mnyt is attested elsewhere with the meaning 'dove' it may be best to understand mnyt 'dove' and mnt 'swallow' in the Ebers text, as suggested by Wb.Drog., though the reverse cannot be altogether ruled out. This evidence well illustrates the dangers of translating mnt and mnit out of context.³⁰

Mnt 'swallow' survived into Coptic (as BNH);³¹ mnwt 'pigeon' did not. Instead GpoomTE was used, derived from earlier qr-m-pt (see below).

Various other words have been considered to designate pigeons/doves³² and swallows³³: bdw (Wb I, 488, 15: Art kleiner Vogel);³⁴ ḥb3 var. ḥb (not in Wb, but cf ḥbw, Wb I, 175, 1: Name eines Vogels?, and, perhaps, ḥby(t), not in Wb);³⁵ šsmty (not in Wb); šm (not in Wb); hsf (not in Wb); s3bw (not in Wb; see shdbw, Wb IV, 228, 7: Art Vogel. Ob richtig?); qr-(m)-pt (Wb V, 181, 2: die Taube; Wb V, 181); sš3 (Wb IV, 280, 14: Name eines Vogels); ḥš3 (Wb I, 229, 11: Art Vogel: ob Taube?); wr (Wb I, 326, 11: die Schwalbe) and (ḥ)ḥnt (not in Wb).

Bdw was translated 'Taube' by Edel, who rejected other identifications of this bird as a sandgrouse³⁶ as he believed the bdw to be a migratory bird (sandgrouses are migrants however).³⁷ Edel also believed ḥb to be a dove, possibly a subspecies of S.turtur,³⁸ and this would accord also with pictures of the ḥb.³⁹ A peasant's voice is compared to that of the ḥbw;⁴⁰ since few birds are voiceless it is difficult to identify the bird from this text alone,⁴¹ and to confirm or deny whether it was merely a variant of ḥb3 or ḥb. The word has been translated 'crow',⁴² or 'raven',⁴³ though the repetitive tones of the pigeon or dove⁴⁴ would suit the context equally well; in other texts the human voice is compared with the drw (kite?), smn (Nile goose) and bnw (heron). Another bird name which may be related to a verb concerning the human voice is sš3 (cf Wb IV, 281, 1: umstimmen; IV, 281, 2-3: flehen...), identified by Davies from the representation at Beni Hasan as 'Pigeon(?)'.⁴⁵

Šsmty was the name given to another of the birds depicted at Abûsîr which Edel identified as pigeons. He translated the name literally as 'die Malachitfarbene', comparing Šsmt (Wb IV, 539, 1-3: Ein Mineral), and understanding this as a reference to some species' neck of glossy metallic green.⁴⁶ Šm he took as a designation for the Rock Dove, and hsf for the Laughing Dove;⁴⁷ he accepted the possibility that the terms Šm and hsf might not be bird names but part of a phrase labelling the scenes, though, from the placement of the signs, this does not seem inevitable.

S3bw named a bird depicted at Beni Hasan,⁴⁸ identified by Houlihan and Goodman as a Masked Shrike.⁴⁹ The name is appropriate to this bird; the term s3b is applied to black and white cattle (see Ch.4 : Cattle) and the Masked Shrike is a black and white bird with rufous flanks.⁵⁰ (If this identification is correct the approximate size (c.6") of the irt, hîw and nnbw in the same scene can be established.)⁵¹ The s3bw also appears at Abûsîr where it was identified by Edel⁵² and Keimer⁵³ as a type of pigeon; the Beni Hasan example indicates that this is probably wrong, though a rather pigeon-like bird being carried by a boy is labelled nfr s3b in the tomb of Mereruka.⁵⁴

The name gr-m-pt was translated 'dove' by comparison with Coptic ΓΡΟΟΜΠΕ, 'dove'.⁵⁵ (Compare here the form gry (Wb V, 181, 1: Vögel; Geflügel)⁵⁶). This bird is not depicted but is mentioned a number of times in lists of food offerings,⁵⁷ often close by the mnwt. This would certainly indicate a bird of similar size or type. Another bird from the offering lists, often appearing in parallel with the ht'3 or r geese is the š3⁵⁸ (a variant št may also belong here).⁵⁹ In other lists it is separated from such 'waterbirds' and follows mnwt or gr-pt.⁶⁰ The word occurs with several variant writings, some showing a bird determinative, others showing a bird hieroglyph preceding, or both preceding and following, š3. This has led to the readings st-š3 (this is explicitly written in one case)⁶¹ or s(š3 (Wb IV, 55, 20: Art Geflügel) (which appears written out in a Ptolemaic text)⁶², but also 3pd š3 'ordinary birds', which has sometimes been separated from the bird-name š3.⁶³ It is generally the š3+bird determinative which occurs with the ht-3 and r and this is perhaps, therefore, to be understood as a type of waterbird, a goose or duck. Writings of š3 with the bird sign preceding should then be read s(t)š3 and considered to be a similar type of bird to the mnwt and gr-pt.⁶⁴

Wr as the name of a swallow was deduced from the Pyramid and Coffin Texts and the Book of the Dead,⁶⁵ though in later times it appears exclusively as a phonogram,⁶⁶ while mnt is used to designate the species. ʿnt is attested in a passage recounting a ritual involving various birds.⁶⁷ The word has been compared with one of the bird names at Beni Hasan (usually read ʾrt),⁶⁸ applied to bird identified as a type of swallow, despite the fact that the bird so named does not have a swallow's forked tail. The toponym ʿnt from the Coffin Texts has been read as a variant writing of mnt,⁶⁹ though the ritual text would seem to confirm ʿnt as a separate word. Note that ʿnt is also attested in an unfortunately garbled list of offerings from Luxor;⁷⁰ from its position in the list it is likely that a much larger bird than the swallow is intended and, therefore, that this identification should be abandoned.

A number of bird-names may be inferred from the phonetic use of signs with the forms of birds. Examples of these are w (Wb I, 243: der junge Vogel, den die H[ieroglyphe] darstellt (ob Wachtel)⁷¹); wr (see above); nh (not in Wb); rhyt (Wb II, 447, 8: Name des Vogels mit dem das folg. Wort [=rhyt Untertanen, Volk] geschrieben wird), cf rht, perhaps not the same word; and db (not in Wb). Other signs belonging to this group, m and ʿk, are discussed in other chapters.

The nh is attested as a bird name, though only infrequently, and has been identified as the Sennar guinea-fowl, Numida meleagris (L).⁷² The rhyt-bird appears from detailed hieroglyphs to be a lapwing, Vanellus vanellus (L),⁷³ and the db a hoopoe, Upupa epops.⁷⁴ (Hoopoe has also been given as a translation of the bird name kk, (Wb V, 71, 11: Name eines Vogels der als langlebig gilt. Ob 'Kuckuck?') attested in the Ramesseum Onomasticon and at Thebes).⁷⁵

The niw (Wb II, 202, 8-11: der Strauß) is readily identifiable from its determinative (Sign List G34),⁷⁶ as the ostrich (Struthio camelus L). Recent records of ostriches in Egypt suggest that the bird may have existed unobserved there since antiquity (it is sometimes stated that the bird died out in Egypt in the 19th century⁷⁷) or that it may have re-colonized the country by advancing north from the Sudan.⁷⁸ Although the ancient Egyptians pictured and mentioned ostriches as imports from the south,⁷⁹ east⁸⁰ and west,⁸¹ hunting scenes indicate that a considerable number existed wild in Egypt.⁸² Their eggs and feathers were also imported;⁸³ these, together with other parts of the bird, are mentioned in the medical texts⁸⁴ and elsewhere.⁸⁵ To dream of an ostrich was a bad omen.⁸⁶

A New Kingdom text records the nīw 'dancing in the valleys' at sunset,⁸⁷ a scene depicted at Medinet Habu and at Amarna, where ostriches and other animals are shown running beneath the sun's rays⁸⁸. This 'dancing' by ostriches has been noted by various zoologists.⁸⁹

The term may be the ancestor of Berber a.nhil,⁹⁰ it did not survive into demotic or Coptic.

One of the birds from the Beni Hasan 'bird and bat' scene which also occurs on a number of Old Kingdom tomb reliefs is the gnw (Wb V, 174, 2-4: Art Vogel),⁹¹ also read ksnw⁹² (Wb V, 69, 6: Wohl Name des Vogels, den die Hieroglyphe darstellt⁹³). Wb considered the latter to be 'kleine, den Früchten schädliche Vögel wie Sperlinge'. The former has been identified by several authorities⁹⁴ as the Golden Oriole, Oriolus oriolus (L), which still occurs in Egypt.⁹⁵ Apart from its appearance as a label for the birds in tomb scenes⁹⁶ the word gnw also occurs in the medical texts.⁹⁷ From the similar colouring of the gnw and ksnw,⁹⁸ and the fact that the sign with which ksnw is written (Sign List T19-20) may also be read gn, the two designations should perhaps be read together as gnw; there is, however, a demotic word ksnw,⁹⁹ which would indicate that the earlier term should not be deleted altogether.

A bird discussed by Gaillard together with the oriole was that called swrw (Wb III, 429, 7: Name eines Vogels), attested both at Beni Hasan¹⁰⁰ and at Abûsîr.¹⁰¹ Gaillard identified it with reason as the Roller, Coracias garrulus L.¹⁰² Like the oriole this bird is found in modern Egypt, together with the species C.abyssinicus Hermann, the Abyssinian Roller.¹⁰³

The p'rt (Wb I, 504, 14: Art Geflügel), nhnt (Wb II, 312, 7: ein Vogel, von sprichwörtlich weißer Farbe), snfrw (Wb IV, 163, 15: ein Vogel von schwarzer Farbe), skm (Wb IV, 318, 7: Art Geflügel) and tt (Wb V, 413, 14-15: Sperling) have all been identified, though generally on somewhat uncertain grounds.

p'rt occurs in lists of birds destined as offerings¹⁰⁴ and once, again with the names of other birds, in a mathematical problem.¹⁰⁵ It also appears in a medical text,¹⁰⁶ and a ritual text.¹⁰⁷ Similar terms p'3t, which occurs in a letter to a man's dead mother, and p'3, in a text berating an idle pupil,¹⁰⁸ have been compared with this word.¹⁰⁹ Wreszinski suggested for this bird 'Wachtel' (quail), noting that the

translation was, however, 'nicht sicher', but deducing from the mathematical text mentioned above that it was a bird of a similar size to a dove (mnwt). P'rt was also translated 'la Caille' by Loret,¹¹⁰ comparing the term with the Coptic $\pi\eta\rho\epsilon$ ¹¹¹. Doubt was cast on this equation by Gardiner and Sethe,¹¹² but it continues to be proposed in etymological dictionaries.¹¹³ The common quail, Coturnix coturnix (L), is still found in Egypt today;¹¹⁴ numerous agricultural scenes from the ancient tombs attest to their presence there at an early date.¹¹⁵

Nhnt and snfrw both occur in the same text at Amarna : 'until the nhnt becomes black and until the snfrw becomes white'.¹¹⁶ Snfrw may also occur at Maidûm,¹¹⁷ and a term nhnh occurs in a rather garbled list of bird names at Luxor.¹¹⁸ From the Amarna examples Davies¹¹⁹ believed the birds nhnt and snfrw to be the swan and crow respectively (as being typical white and black birds). The translation of nhnt as swan was questioned by v.d. Walle,¹²⁰ following Störk's suggestion that dndn designated the swan,¹²¹ but, as has been seen above (Ch.15: Waterbirds) the dndn is rather to be compared with the Old Kingdom goose name dnw, and a term for the swan to be sought elsewhere. The occurrence of nhnh in an offering list would not preclude an identification of this bird as a swan since a swan is depicted in precisely this context in the tomb of Ptahhotep.¹²² No other term has been consistently accorded the translation 'crow' though demotic 3bk/ḥbk¹²³, Coptic $\alpha\beta\omega\kappa$,¹²⁴ have been regarded as designating its close relative the raven. Both crows and ravens are found in Egypt today.¹²⁵

The skm appears only once, in a text concerning the upset of peaceful life at the water's edge.¹²⁶ Görg¹²⁷ compared it with Hebrew skwi, also a hapax, which he translated 'Hahn' (cock), with the comment: 'Die Bezeichnung könnte zwar asiatischen, aber wohl nichtsemitischen Ursprungs sein, zumal der Hahn Importtier aus dem indischen Raum zu sein scheint.'

The earliest known representation of a cock from ancient Egypt is to be found on an ostrakon from Deir el-Medîna ;¹²⁸ a Dynasty 18 text referring to birds (3pdw) which 'lay (ms) every day' may also describe this bird.¹²⁹ From the time of the Persian occupation of Egypt gmt was used of domestic fowl¹³⁰ - cf demotic kjmi¹³¹ and Coptic $\delta\lambda\iota\mu\epsilon$ ¹³² - though this word originally described the Glossy Ibis (see Ch.15 : Waterbirds). Between the first mention of these birds in the texts (as 'birds' only) and the transference of gmt, it is possible that a specific name was coined for them, and the loan of a foreign term (cf

ssmt, adopted with the import of the horse) not unlikely. Various representations of the bird¹³³ permit it to be identified as Gallus gallus (L), the Red Junglefowl or domestic fowl.¹³⁴

The tt is attested only a few times, one of these being as the name of a type of bread or loaf¹³⁵ (for similar designations see h, k3, iw3, q3fy and r). In the other texts it is recorded as doing damage to the crops,¹³⁶ a characteristic of sparrows but also other birds.¹³⁷ Wb translated 'Sperling' without comment; Černý¹³⁸ also translated the Coptic ⲭⲁⲭ, derived from tt, as 'sparrow' comparing ⲭⲟⲩⲭⲟⲩ 'twitter'.¹³⁹

A considerable number of bird-names occur only once or so infrequently or in such contexts that they are impossible to identify. These are listed in alphabetical order below:¹⁴⁰

3bnn (Wb I, 8, 6: Art Vogel), var. ibnn (not in Wb)¹⁴¹ - note here also the fish-name 3bnn, i33w (not in Wb)¹⁴²

i3bt (not in Wb), which appears in a ritual text¹⁴³ and elsewhere,¹⁴⁴

imtr(?) (Wb I, 88, 17: Name eines Vogels), possibly to be read ims3,¹⁴⁵

inb (not in Wb), from a text recording rituals involving birds,¹⁴⁶

idw (Wb I, 152, 3: Art Vogel), from the medical texts,¹⁴⁷

w var. iw (not in Wb) from the Coffin Texts,¹⁴⁸

nnbw (Wb I, 192, 14: Name eines kleinen weißen Vogels), depicted at Beni Hasan¹⁴⁹ but still unidentified,

h(?) (Wb I, 225, 13: Name eines Vogels)¹⁵⁰

hiw (not in Wb),¹⁵¹ possibly to be taken as a variant of hy (see Ch.16: Birds of Prey),

w3d3d (Wb I, 270, 3: ein Vogel), in parallel with bik but, from the determinative, apparently not a bird of prey itself,¹⁵²

wdf (Wb I, 409, 8: Name eines Vogels),¹⁵³

bhwt (not in Wb), a bird associated with the gods and showing a 'hawk-on-perch' determinative,¹⁵⁴

pr (Wb I, 531, 8: ein Vogel), possibly a bee-eater,¹⁵⁵

mšꜥ (Wb II, 156, 17: ein Vogel), in a medical text,¹⁵⁶

swtt (not in Wb), translated 'danger-bird(?)' by Faulkner; it appears together with the crane (d3t),¹⁵⁷

srdf (not in Wb), from an offering list,¹⁵⁸

shywt, in the title imy-r shywt (Wb IV, 236, 11), to be compared with sht (Wb IV, 262, 3 - 263, 2: Vögel mit dem Netz fangen) and shty (Wb IV, 263, 3-4: der Vogelsteller) hence, presumably, meaning merely 'trapped birds',¹⁵⁹

k3d (not in Wb), in parallel with an ibis (hb),¹⁶⁰

kbk (not in Wb, but cf gbq3 etc. below),¹⁶¹

krkr (not in Wb) - as it appears with gr-pt it may be a similar (possibly a larger) bird,¹⁶²

knmt (Wb V, 132, 7: ein böser Vogel), possibly a seagull - compare here the animal name knmt,¹⁶³

g3bqw (Wb V, 155, 1: Art Vogel), var.(?) gbq3 (Wb V, 165, 2: ein dem Toten feindlicher Vogel), translated 'vulture' by Faulkner, although this does not suit the determinatives, and 'raven' by Ebbell, though without comment,¹⁶⁴

ddwn (Wb V, 502, 6: ein Vogel?), from the Pyramid Texts,¹⁶⁵

dwꜥt (Wb V, 551, 8: Art Vogel oä), from the Coffin Texts.¹⁶⁶

Female birds, where specifically mentioned, were called hm(t) 'female',¹⁶⁷ usually in conjunction with the name of the male. St 'pintail' and smnt '(female) Nile Goose' (see Ch.15: Waterbirds) are exceptions.

Two words for 'fledgling' were recorded by Wb. Of these tj (Wb V, 338, 14: junger Vogel ...) is the more common¹⁶⁸ and could be applied to the young of other animals¹⁶⁹. The hieroglyph tj was represented by a young bird (Sign List G47) depictions of which in naturalistic settings were studied by Davies;¹⁷⁰ she, like Gardiner, believed the tj to show a duckling.

The second term, sms¹⁷¹ (Wb IV, 142,7 : die junge Brut des Geflügels), is obviously connected with ms 'give birth' or (in the case of birds) 'lay'. msw also appears to be attested as a term for chicks in the phrase msw irw-pt.¹⁷² (For msw and the similar term msyt applied to other animals see especially Ch.4: Cattle and Ch.8: Horse and Donkey).

W3r, unknown to Wb, but attested on an ostrakon,¹⁷³ was compared by Černý to Coptic ογαλ;¹⁷⁴ he translated the term: 'young bird (which can neither walk nor fly), fledgling'.

PART 3 : OTHER ANIMALS

Chapter 18 : Fish

To the ancient Egyptians fish were inextricably connected with the Nile. Whenever the river was depicted fish were shown within it and one text states that fish lived on its water.¹ It is only in two sources from the New Kingdom that fish from other regions are recognised; the 'Punt reliefs' from the temple of Hatshepsut at Deir el-Bahri show fish of the East African and Indian coasts² and a New Kingdom text lists the names of sea fish.³

'Fishing and fowling' scenes of all dates illustrate the importance of fish as a source of food.⁴ This is also shown by the fact that the majority of recorded fish names are attested on ostraca noting the payment of fish, among other foodstuffs, to the workers of Deir el-Medina.

The place of fish in mythology was limited.⁵ Certain species enjoyed cult worship and were mummified.⁶ Two species were depicted in the heavenly Nile guiding the solar bark in its hazardous journeys across the sky (the int and the sbw). Two (the int and h3) were of particular significance in the fishing and fowling scenes already mentioned, being guarantors of rebirth after death. One species (itnw) was especially associated with the fish deity of Mendes, Hat-mehit.

Gamer-Wallert's exhaustive treatise on fish in ancient Egypt⁷ included a lexicographical study of some 70 individual fish names and the discussion below will use this work as a starting point. Certain elements in the book are open to criticism, not least the wholesale adoption of Gaillard's list of species identified from ancient tomb reliefs⁸ without any attempt to update the zoological nomenclature.⁹ Nile species, which may well have been named by the Egyptians even if never depicted, are not considered.

Only a few of the fish names preserved from ancient Egypt are readily translatable, though even in these cases it is usually not possible to identify down to the species level. These include the Nile Perch, Lates niloticus (L) (h3- Wb I, 217, 4-5: der Nilbarsch);¹⁰ Clarias sp (r- Wb II, 209, 1-6: Art Fisch; der Wels);¹¹ Synodontis sp (wh^c - Wb I, 350, 12-14: Art Fisch)¹² var. hw^c¹³; and Tetraodon lineatus (L) (spt- Wb IV, 435, 9: der Igelfisch).¹⁴ The names of these fish are attested in lists of fish names and in the medical texts and occasionally elsewhere. The Grey Mullet has been recorded as the

determinative of three words - hb3,¹⁵ hskmt var. h/slkt,¹⁶ and bg¹⁷ as well as being used as a phonetic sign (ḥ).¹⁸ ḥ itself is attested as a fish name.¹⁹ Two other fish were common as phonetic symbols and can be identified from the hieroglyphs as members of the genus Sarotherodon or Tilapia and Mormyrus; these are the int (Wb I, 92, 12-15: Ein Nilfisch, 'bulti')²⁰ and h3t (Wb III, 539, 8: der Oxyrhynchusfisch²¹) respectively.

Three further fish names were identified by Gamer-Wallert as designating members of the genus 'Tilapia' (Sarotherodon/Tilapia); these are the wd²² (Wb I, 399, 7-8: Art essbarer Fisch von roter Farbe), also written w3d²³ (Wb I, 268: Art Fische), the dšrw²⁴ (Wb V, 492, 10-11 : Art Fische) and the imsk3²⁵ (Wb I, 88, 10 : Art Süßwasserfisch).

Both w3d and dšrw are mentioned together with another fish, 3bdw (Wb I, 8, 23: Art Fische) in place of its usual companion the int,²⁶ and it has been suggested from this that the three terms were synonymous. Wd appears also in a hymn to Ramesses VI and in association with the baboon (ḥn).²⁷ Dšrw occurs in association with Horus.²⁸

A fish named w3d nfr is depicted on an ostrakon from Deir el-Medîna ;²⁹ only the hind part remains, and shows a tail fin shaped like those of the Sarotherodon/Tilapia genera. It was this, together with the pattern on the tail, which prompted Gamer-Wallert to regard w3d as synonymous with int.³⁰ The w(3)d is elsewhere described as being red,³¹ though its name suggests that it was green (w3d). That a 'green' fish should be described as red would, according to Gamer-Wallert, suit the shimmering colours of Tilapia. Keimer³² also believed this to be the case, noting the variety of the colour of stones in which figures of Tilapia were made. However, both int and w3d appear together in another text,³³ which suggests that the words denoted separate species (or at least different types); this text is not commented upon by Gamer-Wallert. As the text lists fish as food it is clearly not the case that w3d was an epithet describing the int, in the way that htt 'chatterer' describes the baboon ḥn. In any case an early text gives w3d a different determinative from int.³⁴ imsk3 appears in parallel with w3d and int and cannot, therefore, be entirely synonymous with these.³⁵

Despite being depicted mummified in the tomb of Khabekhnet³⁶ (Theban Tomb No.26) the 3bdw has resisted identification.³⁷ It is partly obscured in the tomb scene by the figure of Anubis who is

attending to its mummification; only the tips of the dorsal and anal fins and its tail are visible. It is described in the accompanying text as the '3bdw of lapis lazuli'; elsewhere '3bdw of gold'³⁸ is a more common appellation.

The original translation of 3bdw, from a comparison with Coptic ⲉⲩⲱⲧ, Arabic at-tirsa, was 'turtle'.³⁹ Many texts, however, mention the 3bdw, (alone⁴⁰ or with the int, dšr or w3d⁴¹) as accompanying the bark of Rē', and representations of this scene show two types of fish guiding the boat.⁴² In scenes showing the deceased tomb owner spearing fish the int-fish is accompanied by the Nile Perch, Lates niloticus,⁴³ but the name of this fish is h3, and it clearly differs from the 3bdw of Khabekhnet and the second fish of the solar bark drawings in having a rounded rather than a slightly indented tail.

The problem of the identification of 3bdw was addressed at some length by Gamer-Wallert⁴⁴ who rejected various species as being different in some degree from that fish as depicted: Labeo niloticus, Barbus bynni, Schilbe mystus, Polypterus bichir (a suggestion of Ebers),⁴⁵ Lates niloticus, Petrocephalus sp. (because of the characteristic lip of this fish), Mugil sp. (though this remains a possibility).⁴⁶ This difficulty in identifying the 3bdw with any known species has led to the suggestion that the 3bdw was a purely mythical beast.⁴⁷ It was closely associated with Rē'⁴⁸ and Amun⁴⁹ (because of this it has been identified as an eel),⁵⁰ Horus⁵¹ and other deities⁵² and is attested in magical texts.⁵³ Nevertheless it also appears in a number of rational texts - on ostraca⁵⁴ and on weights.⁵⁵ A further text states that this fish should not be eaten on certain festival days,⁵⁶ and it was used in medicine,⁵⁷ as well as in magico-medical remedies.⁵⁸ 3bdw, therefore, evidently denotes a real fish.

As mentioned above, the mullet has been named as the fish which determines the words bq, hb3 and hskmt and writes the phonetic group cd. Another fish, bry (Wb I, 465, 10: ein Nilfisch),⁵⁹ has also been identified as the mullet, by comparing Coptic ⲉⲩⲱⲧ and Arabic bûri, 'mullet'.⁶⁰ As one text records bry as a sea-fish this may be possible.⁶¹ (Likewise the New Kingdom term s3r (cf Arabic šal, Synodontis schall) was held to denote the fish originally called wh).⁶²

This profusion of terms apparently denoting the same fish has received considerable discussion. Edel⁶³ presumed that, in the Old

Kingdom, ḥdw was a generic term for mullet, with bq, ḥb3 and ḥskmt denoting the three species M.cephalus, M.capito (now Liza ramada) and M.auratus. In the Middle and New Kingdoms, he believed, ḥd was the only definite term for the genus Mugil (the terms ḥb3 and ḥskmt are attested only in the Old Kingdom), though he presumed that bry was a 'spezielle Bezeichnung' for a type of mullet. This opinion was also accepted by Gamer-Wallert.⁶⁴

In two New Kingdom Texts⁶⁵ both bry and bq appear together in addition to the ḥd and would, therefore, seem to denote different types of fish (cf ḥnt, w3d and ḥmsk3 above). Whether they denoted different genera, species or sub-species is difficult to say. The deduction of the meaning of bry via Coptic and Arabic is by no means a certainty, and bq written in an Old Kingdom relief showing a market scene may not refer to the fish (a mullet) being handled. It is not impossible that ḥd designated both the genus and the most abundant (typical) species as is the case in other languages.⁶⁶ If the three words did all refer to the same species this would constitute a rare case of 'overdifferentiation' in the ancient Egyptian zoological nomenclature, paralleled by the earlier example of ḥd, ḥb3 and ḥskmt and the names of cranes (see d3t, ḥw, wdḥ). ('Overdifferentiation' is a phenomenon described by anthropologists from modern primitive languages in which animal categories are subdivided further than the species in Linnaean classification).⁶⁷ This practice was recognized by Keimer⁶⁸ in modern Arabic, in which he noted different words for fish which had spawned and those which had not, for larger and smaller fish and for males and females.

Without the aid of named drawings or textual references which do more than merely record names little can be done to identify the other fish which are mentioned in the ancient Egyptian texts; records of fish names on weights or ostraca show at least that the species mentioned were all edible:

3bnn (Wb I, 8, 5: Art Fisch)⁶⁹

ḥy (Wb I, 38, 8: Art Fisch)⁷⁰

ḥw3 (Wb I, 49, 18: Art Fisch)⁷¹

ḥwbbw (Wb I, 172, 10: Art Fisch)⁷²

ḥs var. ḥsw, ḥsḥs (not in Wb)⁷³

b3w3 (not in Wb)⁷⁴

b3hrt (not in Wb)⁷⁵

btḥn (Wb I, 484, 16: Art Fische (ob richtig?))⁷⁶

p3w (not in Wb)⁷⁷

p3kr (Wb I, 500, 5: Art Fisch)⁷⁸

pnh...i (not in Wb)⁷⁹ not to be confused with the personal
name p3pnht⁸⁰

r33t (not in Wb)⁸¹

r-d3 (Wb II, 399, 6: Art Fisch; Wb II, 469: Art Fisch)⁸²

hwn (Wb II, 484, 16: Art Fische)⁸³

hwtu (Wb II, 485, 9: Art Fisch)⁸⁴

hwy (not in Wb)⁸⁵

hwti (not in Wb)⁸⁶

hmt (Wb III, 80, 13: Art Fisch)⁸⁷

h3y (not in Wb)⁸⁸

hpnpu (Wb III, 260, 6: Art Fische)⁸⁹

s (Wb III, 406, 12: Art Fisch)⁹⁰

3n' (Wb IV, 507, 10-11: Art Fisch)⁹¹

3pnt (not in Wb)⁹²

gst (Wb V, 201, 11: Art Fisch)⁹³

ds (Wb V, 619, 2: Art Fisch), var dss (Wb V, 617, 14: Art
Fisch), dsds (Wb V, 618, 3: Art Fisch), and tssw (not in
Wb)⁹⁴

ddb (Wb V, 633, 2: ein Fisch)⁹⁵

A number of fish names which have recently come to light should be
added to Gamer-Wallert's work; most of them occur so seldom that they
cannot be identified:⁹⁶

itn (Wb I, 145, 13: Art Fisch)

imt (not in Wb)⁹⁷

irt (not in Wb)⁹⁸

b3y (not in Wb)⁹⁹

mrt (Wb II, 105, 17 ein Tier (zwischen Fische genannt...
wohl irrig determiniert!))¹⁰⁰

rdit (Wb II, 469, 1: Art Fisch(?))¹⁰¹

sw (Wb II, 426, 11: Art Fisch)¹⁰²

swr (Wb III, 429, 5: Art Fische)¹⁰³

3't (not in Wb)¹⁰⁴

stpw (not in Wb)¹⁰⁵

3dy (not in Wb)¹⁰⁶

kwii (not in Wb)¹⁰⁷

d'wt (Wb V, 535, 5: ob: gedorrte Fische?)¹⁰⁸

s3 (not in Wb)¹⁰⁹

h3 (not in Wb)¹¹⁰

'Itn is the most frequently attested and was associated with the deity of Mendes, Hat-mehit, 'Foremost of Fish'.¹¹¹ The word was considered a miswriting of Int by Montet in a study of various texts of the Ptolemaic Period,¹¹² though earlier attestations are provided by the Cairo Calendar¹¹³ and P. Sallier IV.¹¹⁴ The term also appears in a passage relating the evil deeds of Seth¹¹⁵ and is recorded in another text among the fish of the wjd-wr.¹¹⁶

The Edfu texts, the Cairo Calendar text and P. Sallier IV all associate the Itn-fish with Busiris (Mendes), and P. Sallier IV and the Calendar text mention also the deity Hat-mehit. The nome sign for the Medesian nome shows a fish which has been identified as a dolphin,¹¹⁷ and the text numbering the Itn among the fish of the sea has been taken to support this proposal.¹¹⁸ Engelbach,¹¹⁹ on the other hand, compared the fish of this sign with the fish which determines the word bwt and the h3 -fish (Mormyrus sp) and concluded that the fish of Mendes was the same as that determining the word bwt, the fish often called 'Schilbe' in Egyptological literature (probably Schilbe mystus, though Eutropius niloticus is also possible).

A further few fish names have been deduced from words which show fish determinatives, notably bwt (Wb I, 453, 8ff: der Abscheu... cf Wb I, 453, 5-6: verabscheuen) - bwt was also noted as a fish name by Wb (Wb I, 453, 4: Art Fisch) though from the texts quoted it is difficult to tell whether it was the fish (and not some other taboo food) which was meant;¹²⁰ srk (not in Wb with fish determinative);¹²¹ sbnw (Wb IV, 89, 11: Art Fisch)¹²² var. bsnt (not in Wb)¹²³, and bs (not in Wb as a fish name).¹²⁴

Two words originally believed to be fish names are ph¹²⁵ and tmt¹²⁶ (Wb V, 306, 5-6: Art Fisch). However, these should be understood as 'hind-part' and 'whole' respectively, and the following fish hieroglyph in the texts read rmw 'fish'. This is also the case with phnt, recorded by Gamer-Wallert as the name of a fish. It appears to be a personal name with (in some cases) the 'seated man' (Sign List A1) determinative not written; the fish sign following must in all cases be read rmw, as other examples from the ostraca show.¹²⁷

Three additional words belong best in the category of 'fish' - wd'yt 'mollusc' (Wb I, 407, 6-9: etwas offizinell Verwendetes),¹²⁸ h3t (Wb III, 218, 17: Muschel?)¹²⁹ and nwr (not in Wb), which sometimes shows a fish as its determinative, translated by Meeks 'un animal marin(?)'.¹³⁰

Chapter 19 : Reptiles and Amphibians

The Egyptian term most closely expressing English 'reptiles' is ddft (Wb V, 633,6 - 634, 2 : Wurm, Gewürm, auch : Schlange) which is discussed in the chapter on classification. The term seems to have had as its focus snakes and other wriggling or creeping creatures, as is shown for example, by the most common determinative of ddft, 𐍌, and by the replacement of ddft by hf3w 'snake' (Wb III, 72, 14-20: Schlange) in some of the classification lists. Certain reptiles and amphibians, notably crocodiles, turtles and tadpoles, appear to have been considered by the Egyptians to have had closer affinities with fish than a snake-oriented class of animals (see further below), but will be discussed in this chapter for convenience.

It appears that the Egyptians seem to have included in the snake group (by giving them the 𐍌 determinative) animals which are not, in the modern zoological sense, snakes at all. An example of this is lnr (Wb I, 98, 10: Art Wurm der Holz frisst)¹ and presumably also the k3k3 (Wb V, 142, 9 : Art Wurm der Holz frisst) which replaces it in a parallel text,² both of which (from the contexts in which they appear) must designate insect larvae.³ Compare also p3yw (Wb I, 498, 5: Bez von Tieren, die im Holz leben (Würmer?, Ameisen ?)).⁴ Whether the Egyptians were aware of this, and merely determined lnr and k3k3 with 𐍌 because they resembled snakes more than any other type of animal (mammal, bird, fish), as is the case with English 'woodworm' (the larval stage of the Common Furniture Beetle, Anobium punctatum), or whether they really believed the creatures to be a type of 'snake', is probably unknowable, though it is possible that they did realize connections between dissimilar forms of the same animal (eg tadpole and frog).⁵



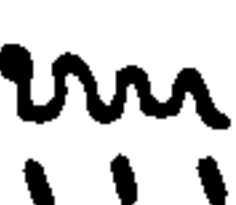
In view of the predominance of snakes in the Egyptians' concept of reptiles it is reasonable to begin with a review of the terms designating these creatures. hf3w and hf3t, the most common and most inclusive terms are fully discussed in Chapter 1, as are the words r, sdrw, hr1w-ht.sn and hrrt, which may also be quite broad in application. A full discussion of snake names is somewhat hampered at present by the lack of any complete publication of the Brooklyn papyrus 47. 218. 48 + 85, sometimes known as the 'Snake-charmer's Manual'. This text was being worked on by Sauneron before his death and he published a preliminary description of it in 1968;⁶ in it the snakes of Egypt are described and associated with various deities. Although a certain

amount of information may be gleaned from studies which mention this papyrus, notably works of Vandier,⁷ Goyon⁸ and Sauneron himself,⁹ it should be borne in mind that much of the discussion below may have to be revised when the papyrus, currently in preparation by IFAO, is finally published. Altogether some 30 species of snake are known from Egypt today and this number may have been greater in antiquity,¹⁰ it would be interesting to see the extent to which the Egyptians recognised these species in this apparently thorough and systematic text.

Outside mythological texts (in which snake-names often seem to be only epithets derived from the animals' appearance and behaviour) terms for snakes are not particularly numerous or common. Many occur predominantly or solely in the medical texts as causes of disease, and, therefore, like the ḥnr and kḳk3 mentioned above, are not 'snakes' as we understand them.

The ḥpnnt (Wb I, 180, 6-7: Art Wurm oder Schlange) occurs nine times in the medical corpus;¹¹ its appearance in one prescription together with flies and beetles might indicate that it was a very small creature and this seems to be corroborated by the use in all but one prescription of the whole animal, rather than just parts of it.¹² In a text from P. Ebers paralleled in P. Hearst ḥn'(rt (Wb I, 191, 15-17: Art Wurm oder kleine Schlange, auch im Wasser lebend (ob Aal oä (?)))¹³ replaces Hearst's ḥpnnt, which might suggest that the ḥpnnt too could be found in water. The word is determined by ḥ as well as wn which originally led Chassinat to distinguish two animals, translating ḥpnnt with cow's-skin determinative as 'otter'.¹⁴ However, both writings are found in P. Ramesseum III, which Wb. Droq. took as an indication that the two forms designated the same animal.¹⁵

It should be noted that certain other animal names have varying determinatives, notably scorpions, frogs, tadpoles, turtles and certain insects.¹⁶ In all these cases the animals in question are anomalies within the classificatory system recognized by the Egyptians, namely a division of the animal kingdom into walking (mammals), flying (birds), swimming (fish) and creeping (reptiles) creatures. Frogs and turtles, in that they are both water-dwellers, share a characteristic with fish, but are clearly distinct from fish and may thus take a general animal (cow's skin) determinative. Certain insects fly like birds and thus have bird determinative, but those which do not might also take ḥ. Scorpions, which, like turtles, have their own specific determinative,

might also show , though they were closely associated with the class ddft which itself, representing a variety of creatures, might take  instead of  as determinative.

pnnt may, therefore, be an animal of this sort - compare Barns' translation 'Perhaps "newt"'.¹⁷ - but any such interpretation must be modified by the absence of an alternative determinative for n'rt. Other translations have included snake¹⁸ or lizard,¹⁹ mole²⁰ and worm or slug.²¹

W'wjt (Wb I, 279, 12-13 : Art Wurm) is attested only once in the medical texts, described as an animal found in excrement,²² and therefore translated 'grub' by Ebbell.²³ It also occurs three times in the Harris magical papyrus as the bait which has attracted various birds²⁴ and is perhaps to be translated 'maggot' (the larva of some type of fly).

Pnd (Wb I, 511, 4 : Art Eingeweidewurm) occurs six times in the medical texts, but only in Papyrus Ebers.²⁵ The prescriptions recorded are designed to rid the body of the worms themselves²⁶ and of the symptoms caused by them.²⁷ One is intended to combat the illness caused by hfst as well as pnd so the two are evidently similar.²⁸ The hfst is found in the stomach (m ht);²⁹ one preparation against the pnd is to be applied to this part of the anatomy³⁰ and another is to purge (wh3) the stomach.³¹ Ebbell identified the pnd as a tape-worm,³² a suggestion which was followed by Leca.³³

Hrrwt (Wb III, 150, 1: Art Eingeweidewürmer (im Bauch) als Krankheitserreger) - compare here hrrt (see Ch.1 : Classification)³⁴ and hrrw (Ch.20: Insects) - occurs but once in the medical texts, again in the body (m ht).³⁵ The identification of this creature as the 'schistosoma' worm³⁶ was rejected by Ghalioungui; he believed hrrw to indicate the urinary blood clots (caused by this worm) themselves,³⁷ and that hrrw (like n'rt, above) named a type of worm to which these threads of blood were similar. Wb. Droq. read the term as hrrt and thus believed it to mean 'worms' in general. Without further attestations it is difficult to add more to these arguments.

Another internal parasite was the btw (Wb I, 985, 11-14: Bez. der Giftschlange, Bez. einer unheilbaren Krankheit, Bösewicht (?)), var. bt3w (Wb I, 484). In three cases the btw does appear to designate a complaint.³⁸ In one instance in P.Ebers there is a warning: 'do not

approach it, it is a case to be avoided', and Wb. Droq. therefore explained its name: 'Die Grundbedeutung des Substantivs btw ist wahrscheinlich "einer, vor dem man davonläuft" oder "einer, dem man aus dem Wege gehen soll"'.³⁹ In P. Edwin Smith btw appears in a gloss which again counsels that the condition should not be treated.⁴⁰ Ebbell identified btw as the hookworm⁴¹; this was questioned by Ghalioungui⁴² without suggesting an alternative translation. In another text the btw appears to have been a poisonous snake;⁴³ elsewhere magic (tp-r) is to be invoked against it.⁴⁴

Fnt (Wb I, 577, 5-6: Wurm, Schlange) were found in the fingers and toes⁴⁵ (and presumably other limbs)⁴⁶ and were also supposed to cause tooth-decay.⁴⁷ Prescriptions to draw them out (šd)⁴⁸ or kill them outright⁴⁹ are preserved. Magic was also used against them.⁵⁰ Fnt were also known to infest decaying flesh⁵¹ and other substances.⁵² The fnw of a snake (hf3w) may be related in some way to this word.⁵³

Wb. Droq. questioned whether fnt did designate an actual worm or worm-like creature, since all the medical preparations are for external use (even probably the example from P. Ramesseum III as it comes between two medicaments to be used externally), and commented: 'viehlmehr ist an ein wurmähnliches Gebilde zu denken, das offenbar aus geronnener Flüssigkeit (Eiter oä) besteht'.⁵⁴ They compared here the (n'rt)-worm which appears in a description of a 'thread' of blood (also called (n'rt)).⁵⁵ Nevertheless, the prescriptions which try to 'draw out' the fnt suggest that they were indeed real 'worms' (cf sp(d) below), though the assertion that fnt could be found in teeth must be explained as a superstitious belief.

Fnt were numbered among the first created beings.⁵⁶ They occur a number of times in the Book of the Dead⁵⁷ and (m-fnt) ('worm swallower') was the name of the guardian of a gate in the underworld.⁵⁸ In the Pyramid and Coffin Texts the fnt are presented as inimical creatures.⁵⁹ A fnt of silver appears in P. Jumilhac.⁶⁰

The word survived into Coptic as γντ (CD 623b: 'worm')⁶¹ where it is again particularly associated with rotting flesh. Vycichl compared the word with an Arabic word meaning 'manger toujours avec avidité, sans choisir ses mets ni se dégouter de rien'.⁶²

Several other terms seem, like fnt, to designate the maggots which infest rotting matter. These are hsbtt (Wb III, 168, 8: Würmer im

Leibe?),⁶³ hdr (Wb III, 214, 13: Art Würmer welche die Leiche fressen),⁶⁴ mtw (not in Wb),⁶⁵ dm (Wb V, 451, 6-7: Wurm),⁶⁶ var. tm (not in Wb),⁶⁷ dnm (Wb V, 467, 12: Würmer (welche die Leiche fressen)).⁶⁸ The dm is also recorded as attacking old manuscripts.⁶⁹ The name may be derived from dm 'pierce, sting' (Wb V, 449, 1-7: stechen) and thus translated 'biter'. The word probably designates the larva of a type of insect.



The connection between 'snakes' and putrefaction is further indicated by Coptic $\lambda\omicron\upsilon\lambda\upsilon$, from Egyptian nfnf (Wb II, 252, 10: Schleichendes, Gewürm⁷⁰) or rfrf (not in Wb).⁷¹ The Coptic word means 'rot, putrefy',⁷² though the Egyptian clearly denotes an animal. Nfnf is attested as nfnf nb, in parallel with hf3w nb, hf3t nbt, which would suggest that it had a similar broad meaning.⁷³

Spyw (Wb III, 440, 17-18: als Krankheitserreger) and srftt (Wb IV, 197, 17: Art Wurm) occur in one medical text together with int.⁷⁴ There is only one attestation of srftt, but spyw also occurs as an infestation of fingers and toes, with the variant writing spd (Wb IV, 108, 1:.. als Krankheitserreger).⁷⁵ It is possible that spd is an entirely different creature. This same text also preserves the mention of a s3-worm, unattested elsewhere.⁷⁶

Two true snakes were used to write phonetic signs: f, (Gardiner, Sign List I9: 'Cerastes cornutus'),⁷⁷ and d, (Gardiner, Sign List I10: 'Naja haje').⁷⁸ Prisse d'Avennes identified the former as a slug because of a Dynasty 18 representation of the animal climbing a papyrus stem,⁷⁹ but Murray believed neither this opinion nor the identification of the f as a Horned Viper.⁸⁰ Keimer⁸¹ thought that the f showed this snake moving by 'side-winding' and that cryptic signs for 'enter' and 'leave', showing an f entering or leaving a hole (the m-hieroglyph, Sign List Aa13), were derived from the snake's habit of burrowing into sand.⁸² He believed that f could be used as a determinative in place of w.⁸³ He also noted a hornless variant which he identified as the species C.vipera.⁸⁴

Murray proposed the cobra Naja nigricollis⁸⁵ as a translation of d; she believed it to be the same species as that of the royal uraeus, the rôle of which was to protect the King by vanquishing his enemies.⁸⁶ This was not the opinion of Störk⁸⁷ who accepted the identification of d as Naja haje; he did agree that the poison-spitting N.nigricollis must have been the Egyptian uraeus, 3rt (Wb I, 42, 1-4: Schlange,

zumeist heilige Schlange, Schlange an der Stirn des Königs vgl. οὐραῖος).⁸⁸

There has been considerable discussion as to the reasons for which these snakes represented f and d. It has been believed that the sounds may have been derived (on the acrophonic principle) from the names wf⁸⁹ and jd⁹⁰ (not in Wb) respectively. Both f and d (Wb V, 503, 1-8: das Wort von dem die Hieroglyphe  ihren Lautwert d erhalten hat, die Viper, Schlange) appear in texts as nouns in their own right⁹¹ which suggests that they existed quite independently, though in the Sign Papyrus the f hieroglyph is explained by a longer word, partly lost (fnty or ftft perhaps⁹² - though cf the comment of Wb I, 571, 12 (ft): das Tier, von dem das Schriftzeichen  sein Lautwert hat).

A few more terms are attested as snake names: knw (not in Wb),⁹³ nhyt (not in Wb),⁹⁴ ht (? not in Wb)⁹⁵ and kmy (not in Wb).⁹⁶ All occur only once and therefore do not reveal much of their meaning. Of the remaining terms applied to snakes s3-t3 (Wb III, 410, 16-17: 'Sohn der Erde' als Bezeichnung der Schlangen),⁹⁷ which has been compared with Coptic c1T (CD 359a: 'Basilisk'),⁹⁸ is the most common. From certain determinatives in the Pyramid Texts and the Book of the Dead and a vignette in P. Jumilhac, the s3-t3 appears to have been a cobra.⁹⁹ It was possibly not a species designation, but merely a descriptive term. The s3bt snake (Wb IV, 18, 2: bunte Schlange) twice occurs in the Old Kingdom in a title; it is possible that this term also designated an actual species.¹⁰⁰

K3 with snake determinative occurs in the Coffin Texts¹⁰¹ and the phrase k3 n'y is said to appear in the Snake-charmer's Manual.¹⁰² It may be that k3 means merely 'male' (see Ch.4: Cattle). N'y occurs alone in one text as a variant of hf3w 'snake';¹⁰³ together with the hf3w and d3rt on an ostrakon preserving a piece of writing practice¹⁰⁴ and as proverbially long-lived elsewhere.¹⁰⁵ A possible variant of this word, n'w (Wb II, 207, 8-14: Art Schlange), is also attested;¹⁰⁶ the forms n'y and n'iw and the forms n'wy and n'wt occur in a papyrus from the British Museum.¹⁰⁷ Störk¹⁰⁸ suggested that this term applied to the python, not found in Egypt today but apparently the subject of an ancient cult.¹⁰⁹ Borghouts translated 'smooth snakes'.¹¹⁰ without further comment.

Although 40 species of lizards are known from modern Egypt¹¹¹ the ancient language preserved the names of only two (a third, sknks, is

known from demotic¹¹²). The lizard hieroglyph (Sign List I1) is also found with the reading dmj (Wb V, 453: das Wort von dem das Zeichen seinen Lautwert dmj erhalten hat; compare dm with 'snake' determinative noted above) and (in Ptolemaic texts) msdmt¹¹³ and as the determinative of the ghw-illness.¹¹⁴

Both the terms designating lizards, šj (not in Wb)¹¹⁵ (also found in the Coffin Texts)¹¹⁶ and hnt3sw (Wb III, 122, 9: die Eidechse) are attested in the medical texts.¹¹⁷ In P. Ebers a hnt3sw km 'black hnt3sw' is mentioned,¹¹⁸ indicating that at least two types of hnt3sw were distinguished.¹¹⁹ The other type (or another type) may have been the hnt3sw šm3 'wild hnt3sw' recorded on an ostrakon.¹²⁰ (Compare the 'wild ass' in Ch.8). A spell for changing into a hnt3sw is recorded in Cairo Calendar.¹²¹ Hnt3sw survived into Coptic as ⲁⲛⲉⲟⲩⲥ (cf demotic hntš);¹²² šj did not survive into Coptic in the same form, but is possibly preserved in the first syllable of ⲁⲩⲩⲣⲁ (see below on chamaeleons).

Coptic ⲁⲩⲩⲣⲁ (CD 741a: 'lizard') has been compared with Egyptian hfnnt or hfr¹²³ which seem, however, to be variant forms of hfn(r) 'tadpole'.¹²⁴ There are other similar Egyptian forms apparently denoting snakes, hfnw and hfnnt (Wb III, 74, 17: Bez für die Schlange; Wb III, 74, 18),¹²⁵ which may have a bearing on the Coptic term.

Griffith seemed to believe that hnt3sw and šj designated the same species, which he gave as the 'Green lizard'.¹²⁶ The hieroglyph as represented at Beni Hasan is indeed green; though it has the wrong number of fingers and toes - lizards have 5 toes and 4 fingers, while the Beni Hasan hieroglyph has 4 and 5 respectively.

Both dnf (Wb V, 576, 9 : als Personennamen)¹²⁷ and k3r3 (not in Wb)¹²⁸ have been considered to designate the chamaeleon.¹²⁹ As two species of chamaeleon are known from Egypt it is possible that both do apply to this lizard. Coptic ⲁⲩⲩⲣⲁ (CD 23a: 'chameleon') may be derived from a phrase š-šrw 'manifold of forms',¹³⁰ referring to the chamaeleon's ability to adapt its colour to match that of its surroundings;¹³¹ alternatively the ⲁⲩ may be related to Egyptian šj '(type of) lizard'. Bohairic ⲧⲉⲗⲩⲩ (CD 411b: 'kind of lizard') has been compared with dnf¹³² but no Coptic equivalent of k3r3 is attested. (For further discussion of k3r3 see Ch.14: Miscellaneous Mammals-kiry).

Few species of amphibians are recorded from Egypt by Flower : he mentioned two frog species and three species of toad.¹³³ Frogs and toads are both held to appear in Egyptian representations.¹³⁴ Wb recorded two terms for the former: ḥnh, var. ḥnh¹³⁵ (Wb I, 178, 15-17: der Frosch), occurring once in the medical texts¹³⁶ though more often in Ptolemaic texts,¹³⁷ and krr (Wb V, 61, 5-6: der Frosch), also recorded in a medical text,¹³⁸ and undoubtedly onomatopoeic.¹³⁹ Although seldom attested¹⁴⁰ krr survived into Coptic as κρογρ (CD 177a: 'frog').¹⁴¹ No term for the toad appears in Wb, but pqqt (Wb I, 563, 8: ein Tier) has been considered to name this animal. The word is found in the medical texts,¹⁴² Dawson¹⁴³ noted in his study of ḥpnnt that: 'it may be another kind of slug or snail'. Iversen¹⁴⁴ later thought, because of the determinative of pqqt as a personal name at Maidûm,¹⁴⁵ that it must be a frog or a toad. Despite this Osing recently translated the word 'Wassermolch'.¹⁴⁶

Hfn and its variants¹⁴⁷ have been mentioned above. The tadpole as a hieroglyph (Sign List 18) was used, for phonetic reasons, for the number 100,000.¹⁴⁸ The name may be derived from the verb hfnw 'être recroquevillé'.¹⁴⁹

After Dynasty 18/19 the frog hieroglyph was sometimes used to write the phrase whm-ḥnh 'repeating life'.¹⁵⁰ The association of frogs with resurrection and rebirth may have come about because of the yearly overland migrations of frogs during the mating season. Like snakes, mice and flies they were recorded by classical authors as being spontaneously generated out of the earth.¹⁵¹

A number of terms for crocodiles are recorded in Wb: 3d (Wb I, 24, 11: Krokodil); hr-mryt (Wb II, 110, 4: als Bez. der Krokodile: 'die am Ufer'); mhw (Wb II, 122, 20: als Bez. für die Krokodile); msh (Wb II, 136, 10-137, 5: das Krokodil) fem. msht (Wb II, 137, 1)¹⁵², var. hms (Wb III, 96, 11: Schreibung für msh Krokodil) fem. hmst (Wb III, 96, 12)¹⁵³; hnt (Wb III, 104, 4: in rs-hnt, cf Wb III, 121, 14: Feind in Gestalt des Krokodils); hnty (Wb III, 308, 4: Bez. für das Krokodil); rs-hs3 (Wb II, 398, 5:); swy (Wb IV, 65, 13-14: als Bez. für das Krokodil); k3pw (Wb V, 105, 5-6: als Bez. für das Krokodil); dpw (Wb V, 447, 13-16: Krokodil). Other designations have been noted subsequently, notably hnd (Andreu Cauville, Vocabulaire II, p.17) and ḥnty, var. ḥny (AL 77.4231-4). Young crocodiles were called t3.wy 'fledgling'.¹⁵⁴

Mhw, like mhyt 'fish', seems to be a general term, designating all crocodiles as a class of 'water-dwellers'.¹⁵⁵ and is seldom attested.¹⁵⁶ Note that the figure of a crocodile may determine another term for water animals in general¹⁵⁷ (?myw-mw - see Ch.1: Classification). Dpy may similarly indicate a connection with the crocodile's watery habitat (cf dpt 'boat') and may have meant originally 'floater'. (See also below). By far the most common name for crocodile was msh. All names presumably denote Crocodylus niloticus Laurenti, the only crocodile species of Egypt, also widespread in other parts of Africa.¹⁵⁸

Numerous texts attest that the crocodile ranked among the most deadly animals known to the ancient Egyptians, together with the lion, the snake and the scorpion.¹⁵⁹ The bite of a crocodile is recorded in the medical texts;¹⁶⁰ the Doomed Prince is fated to be killed by a crocodile, dog or snake¹⁶¹ and others also appeared to have this destiny.¹⁶² Death by crocodile is also recorded in other papyri.¹⁶³ The work of the fisherman was scorned because of the perils of a workplace 'among the crocodiles'.¹⁶⁴ In the Tale of the Two Brothers a river full of crocodiles is created as an insuperable barrier between them.¹⁶⁵ Crocodiles were also a danger to cattle crossing the river,¹⁶⁶ and numerous scenes from Old Kingdom tombs showing the warring of crocodiles and hippos graphically illustrate their viciousness.¹⁶⁷ In some instances this was regarded as a laudable quality, and the king who attacked the enemies of Egypt was described as a crocodile.¹⁶⁸ At the same time they were considered cowardly creatures; Asiatics who would attack only the defenceless were compared with crocodiles.¹⁶⁹

Crocodiles played an important part in magic and medicine; their rôle as an agent of fate and destruction was recently discussed by Eyre.¹⁷⁰ The Westcar papyrus recorded that a wax model of a crocodile thrown into the river where a rival bathed became real and devoured him,¹⁷¹ and a spell spoken over a clay model of a crocodile was supposed to relieve a headache.¹⁷² Another text records a spell to be written on the ground over a figure of Amun with a crocodile under his feet.¹⁷³ Their apotropaic rôle is indicated by their appearance on amulets and scarabs¹⁷⁴ and a crocodile-headed god presumably for this reason attended the birth of the royal child.¹⁷⁵ Crocodile fat (mrht) and excrement (hs) appear in the medical texts in prescriptions for various complaints;¹⁷⁶ a fierce illness could be compared with a crocodile¹⁷⁷ (cf s3b for a similar comparison).

The msh was the bjw of Sobek,¹⁷⁸ the crocodile god,¹⁷⁹ and like other dangerous creatures, was associated also with Seth.¹⁸⁰ The vengeful goddess Sakhmet was likewise described as 'foremost of the crocodiles'.¹⁸¹ The crocodile appears in a list of sacred animals, and in lists of tabooed creatures,¹⁸² though eating crocodile flesh in a dream was considered a good omen.¹⁸³ In the underworld the deceased was threatened by crocodiles¹⁸⁴ - the (mmyt-creature which devoured the hearts of the unjust dead was part crocodile¹⁸⁵ - but himself could overcome perils in the form of the crocodile.¹⁸⁶

On rare occasions msh appears in the same text as other terms showing crocodile determinatives, for example hr-mryt, lit. 'those on the river-banks',¹⁸⁷ hnty, lit. 'swimmer upstream' or 'lying on its face',¹⁸⁸ jd, lit. 'the rager'.¹⁸⁹ Both hnty and jd are common elsewhere, jd (almost) exclusively in mythological contexts.¹⁹⁰ Hnty, though also used as the name of a deity¹⁹¹ and occurring in Ptolemaic temple texts,¹⁹² is found in texts referring to the crocodile as an animal.¹⁹³ In one such text hnty is found with another term with crocodile determinative, dpv.¹⁹⁴ This animal is found elsewhere identified with the pharaoh,¹⁹⁵ and with Amun.¹⁹⁶ Müller interpreted the name as 'Schwimmer' which is probably correct (see above);¹⁹⁷ but Brugsch translated 'der Verschlinger, der Fresser'.¹⁹⁸ In a Ptolemaic text at Kom Ombo dpv is used of Sobek;¹⁹⁹ as with hnty this would suggest a meaning close to that of msh.²⁰⁰


Other words with crocodile determinatives are only seldom attested. Hnt appears at Asyût in rj-hnt 'lac alimenté par des cours d'eau'.²⁰¹ and hnty in the Book of the Dead,²⁰² and both are found in texts of Ptolemaic date. Swy is also found in the Book of the Dead in a spell which begins with the assertion that it will 'drive away a crocodile (msh)'.²⁰³ The term appears again, with crocodile determinative, in the toponyms pr-swy (Coptic πCoi , πCwi)²⁰⁴ and iw-swt.²⁰⁵ K3pw occurs only once before the Greco-Roman period,²⁰⁶ and is presumably related to k3p 'hide' (Wb V, 104, 14-17: sich verstecken, sich verbergen). Rj-hs3 again appears only once before the Ptolemaic era.²⁰⁷ Hnd was commented on by Meeks, who translated it 'celui (aux pattes) repliés (?)'.²⁰⁸ Šni was also recorded by Meeks with the translation 'crocodile', comparing Šnty 'l'Ennemi'.²⁰⁹

It seems likely from these texts, and from the zoological evidence, that all these terms describe a single species. Msh should be considered as the primary designation, with the other terms as epithets

or descriptive of the animal's attributes which then gained currency as substantives. (Compare, for a similar practice, the terms for baboons discussed in Ch.10: Monkeys).

Although a number of turtles and tortoises are known to occur in Egypt²¹⁰ the only common species which extends any distance inland is the Nile Soft-shelled Turtle, Trionyx triunguis (Forskål), a species found throughout all African inland waterways except in the north-west and south.²¹¹ This was the identification proposed by Loret for the 3bdw,²¹² though, as was later pointed out by Dawson,²¹³ this is a fish. There is in any case a well attested word with the determinative of a turtle (Sign List I2) štw²¹⁴ (Wb IV, 557, 1-5: die Schildkröte), variants štiw (Wb IV, 556) and štw (Wb IV, 559). The word survives into Coptic as ⲙⲓⲧϥ;²¹⁵ Coptic ⲉⲫⲱⲧ rendered by Arabic 'turtle' in the Scala texts has been compared with Egyptian ps²¹⁶ (not in Wb but in Brugsch, Wörterbuch I, p.183).

štw occasionally appears in contexts which indicate that it designated the actual animal, particularly the medical texts and a text which records the eating of fish and turtles,²¹⁷ but also on an amuletic ivory wand where it appears between a hippo and a crocodile.²¹⁸ This use as an apotropaic figure shows that the turtle was feared - note the comment of Pritchard on sea-dwelling examples of T.triunguis near Turkey: 'fishermen find them so vicious they do not like to bring them aboard'. This was perhaps the reason behind the turtle's inimical association with Rē' and why Seth, as protector of Rē' in the solar bark, is recorded as killing the turtle along with the oryx and Apophis.²¹⁹ Elsewhere the turtle appears as an associate of Apophis²²⁰ and the wish is often made that 'Rē' live and the turtle die'.²²¹ The štw was also believed to be able to swallow the water of the Nile, thus depriving Egypt of the river's life-giving properties and promoting famine.²²² Its evil influence was destroyed symbolically in reliefs of Ptolemaic temples which show the king spearing the animal; the only known earlier (Ramesside) tomb-painting which shows the harpooning of a turtle²²³ presents it in parallel to a hippo-hunting scene, an arrangement reminiscent of the parallel fishing and fowling scenes of other tombs.²²⁴ The isolation of this example and the fact that turtles have been found as offerings from the Old Kingdom²²⁵ would indicate that the hunting of turtles as symbols of the 'Gottesfeind' was not an early theme.

Štwy 'the two turtles' appears as the name of a constellation.²²⁶ A further example of the word, written , was recorded by Wb as a type of fish (Wb IV, 559, 2: Art Fische), though it also compared Štw 'turtle'. Given the context²²⁷ (especially the association with Rē) this comparison appears to have been correct. (On the use of the fish determinative see above and Ch.1: Classification.)

The very similar Šttwt from P. Hearst was translated by Borghouts as 'tortoise (-shell)[?..]'.²²⁸ Meeks translated similarly as 'écaille, carapace de tortue (?)' and suggested a comparison with the Šttwt of the Coffin Texts.²²⁹ (On the use of an animal's name to denote its skin see nh, wnš, šby, etc).

Chapter 20 : Insects

There appears to have been no ancient Egyptian equivalent to the term insect ;¹ these small creatures were classified according to their appearance and mode of movement. Flying insects were categorized with birds and creeping insects with reptiles (see Ch 1: Classification).

Compared with other types of animals only a restricted number of individual insects were named and attestations of each name are few;² the record may be distorted because of the types of texts which have survived. One of the most commonly mentioned insects, and doubtless the most significant, was the beetle, hpr (Wb III, 267,5-9: der Käfer den das Schriftzeichen darstellt), identified as Scarabeus sacer L³, but possibly naming other dung beetle genera - eg Copris - as well as Scarabeus.⁴ The word has been compared with other Semitic terms for the beetle.⁵ In one text the determinative of hpr is drawn with eight legs,⁶ but hpr is unlikely to be the name for the spider, which appears from an ostrakon to be shtt (not in Wb).⁷ Scarab amulets were also named hpr.⁸

The characteristic habit of dung beetles of rolling balls of dung, to be buried as nourishment for their larvae hatching from eggs laid in it,⁹ led to their identification with the force behind the morning sun as it emerged above the horizon, and thence with other ideas of coming into existence and self-creation (hpr - Wb III, 260,7-265, 13: werden, entstehen etc).¹⁰ The soul of the dead pharaoh rising from his tomb was likened to this beetle¹¹ and Horus, among other forms of the sun-god, especially as creator, likewise was described as a scarab.¹²

The scarab and its wing appear as ingredients in medical prescriptions,¹³ and in a New Kingdom magical text.¹⁴ Hpr also appears in the Book of the Dead¹⁵ and in the 'hieroglyphic dictionary'.¹⁶

Hkwn (Wb III,178, 1: off verwendet) also occurs with the scarab determinative (Sign List L1). This word is attested only once,¹⁷ in a medical text. The reading has been disputed and hkw n (hpr) (hkw not in Wb) suggested,¹⁸ though a very similar form, hknw (Wb III, 180,10 : als Name eines Gottes) is also recorded. Hornung, however, considered this to read hknw (hpr), 'Der Chepri preist',¹⁹ which seems to be a likely interpretation.

Ptolemaic texts also give py/bb and variants with the scarab determinative²⁰ and one text gives hpr as the equivalent of py.²¹ These terms may be compared with the bird name bw (Wb I, 175, 1) and may be derived from the same root, p 'fly'.²² (see Ch. 17: Miscellaneous Birds). The terms have been compared with Coptic ⲡⲁⲃⲟⲩⲉⲓ 'wasp'.²³

nh too is recorded by Wb as the name of a type of beetle (Wb I, 204, 7-8: ein Käferart). In Ptolemaic texts the word appears in or as the name of an amulet (Wb I, 203, 10: Name eines Amuletts in Käfergestalt), once taking the form of an py-beetle,²⁴ and once in a late text a scarab is evidently to be read nh.²⁵ The nh indeed seems to have had an amuletic value from early times.²⁶ No texts refer to the animal itself; in the Pyramid Texts the name appears in puns²⁷ and two further attestations noted by Keimer show nh as a personal name.²⁸ Keimer tentatively identified it as 'le bupestride [jewel beetles] Steraspis...ou...l'elatéride [click beetles] Aegrypnus notodonta LATR[EILLE]'.²⁹

Another term written with scarab determinative is pšy (Wb I, 181, 18: Art Käfer?).³⁰ The animal, depicted in a vignette from the Book of the Dead, appears quite different from the scarab,³¹ and a feminine form of the word (Wb I, 131, 19: Art Heuschrecke?)³² shows the grasshopper (Sign List L4) or cow's skin as determinative. Dawson identified the similar pšwt (also with cow's skin determinative - compare the presence of this determinative in the name of the flea, pw, below) of certain medical texts with the pšyt, and suggested that the scarab sign (Sign List L1) be read pšwt throughout these texts.³³ He also noted the later confusion of pšy and šj 'pig' in the Book of the Dead (including the vignettes),³⁴ which indicates that the word was or became rare and was not well understood. Coptic ⲉⲡⲩⲩⲉ (not in CD; appears as a gloss in a demotic text) has been considered the descendent of pšyt,³⁵ though Černý proposed instead Aramaic hippūšit 'blackbeetle' as the origin of the Coptic word. pš with turtle determinative may be related to this term.³⁶ Taken together, the evidence suggests that pšy(t) was an insect of some kind, similar to a large beetle or grasshopper, and possibly, therefore, a cockroach.³⁷ Keimer, however, suggested it must have been a small beetle such as those found in mummies because of the spell in the Book of the Dead to prevent them from attacking the corpse.³⁸

Two further possible terms for beetles are kw-n-t3 (Wb I, 139, 7: offizinell verwendet (neben Würmern und Fliegen)) and mht (not in Wb).

Both are attested only once. In P.Ebers ḳw-n-t3 has no determinative,³⁹ but in the Pyramid Texts the verb ḳw has a variant determinative showing a beetle; this determinative also appears in the Coffin Texts.⁴⁰ The verb is also associated with t3 'earth' and appears to indicate a deferential gesture.⁴¹ Sethe suggested 'Erdangreifer' for ḳw-n-t3, comparing other words of this stem associated with quarrying, and took the phrase to be an epithet of the scarab.⁴² Meeks also took it as a phrase for a burrowing animal (AL 78.0524 : le fouisseur (?)); Dawson translated 'earthworm'⁴³ and Ebbel 'millipeds(?)'.⁴⁴ The Pyramid Text determinative of a beetle suggests that these last are wrong, but no further identification than 'type of burrowing beetle(?)' can be proposed.

Mht appears only in the Coffin Texts in an obscure phrase which Faulkner did not translate; he offered m ht as an alternative reading.⁴⁵

The term for 'fly', ḳff (Wb I, 182, 14-16: die Fliege), is attested from the Middle Kingdom onwards and survived into Coptic as ⲁϥ.⁴⁶ The meaning of ḳff is made clear by its specific determinative (Sign List L3; the bird or cow's-skin⁴⁷ determinative appears in later writings) and its application to the gold flies awarded to soldiers for their exploits in battle - presumably for showing the same tenacity as displayed by flies at their targets.⁴⁸ ḳff are described as 'flying',⁴⁹ and as 'lying down (ie dying?) and being born every day',⁵⁰ both of which would accord with the translation 'fly'.⁵¹ They were apparently supposed to eat lice (ktṯ).⁵²

Flies appear frequently in the medical texts, usually as an ingredient⁵³ (a considerable quantity of their excrement is mentioned in medical preparations⁵⁴ and may have been collected from the walls of houses).⁵⁵ One prescription is directed against their bites⁵⁶ and spells for protecting the pharaoh from the attack of flies are attested.⁵⁷ A further spell for 'cleaning a fly' which has been swallowed is known,⁵⁸ and in another a magician changes into a fly to enter the belly of his enemy and cause him pain and confusion.⁵⁹ However, in the Coffin Texts a fly is described as 'beneficial'.⁶⁰

Some late variants of ḳff are written ḳfy or ḳf,⁶¹ and this spelling with a different (bee) determinative⁶² is recorded separately by Wb (Wb I, 182, 10: die Biene). Pleyte, who first isolated the word ḳf(y) with 'bee' determinative, identified the creature so named as a

respectively), the choice of determining sign bringing a more precise meaning to the word. Alternatively both words may have developed separately from a common root.

The bee determinative also appears as a variant in the word hspr (not in Wb), written with a specific determinative in the Coffin Texts. The term appears in another text with the 'bird' determinative (Sign List G38/39); a variant of this, written hxr, has the 'bee' as determining sign (Sign List L2).⁷⁹ Faulkner translated this word 'hornet'.⁸⁰ The evidence would indicate that hs|plr was a flying insect, of the shape depicted in the Coffin Texts and with (some of) the attributes of a bee (a sting?). The specific determinative is similar to that of ktt and k33, neither of which can be translated with certainty, though the former may mean 'louse'.

A determinative somewhat similar to that of the 'bee'⁸¹ appears in the word tkkt⁸² (Wb V, 336, 12: ob Schlupfwespe (Ichneumonida oä)). The term is attested only once, in the Pyramid Texts,⁸³ where it appears in a rather obscure phrase together with the grasshopper (snhm). The phrase was translated by Keimer: 'N est né le deuxième jour du mois et il est devenu enceint le 15 du mois, il est sorti de la vertèbre de la sauterelle parmi ces enfants de guêpe.'⁸⁴ The word is probably to be compared with the verk tkk (Wb III, 336, 2-10: angreifen) which suggests that tkkt was an aggressive stinging insect. Faulkner offered 'hornet(?)'.⁸⁵

Another insect name to which the 'bee' determinative has been ascribed is ib3yt (not in Wb). Determinatives in the Book of the Dead have an unusual form which was identified by Budge as that of a praying mantis (Mantis religiosa).⁸⁶ In copies of this passage, though in a confused form, in the tomb of Sethos I and on an ostrakon from Cairo, Keimer noted much more accurate representations of this insect;⁸⁷ because the sign was not accompanied by phonetic complements he did not commit himself to identifying these pictures with ib3yt.⁸⁸ Further variant determinatives show different insects,⁸⁹ others show a bird, or the head of a bird, which Keimer compared with the hieroglyph 1 (Egyptian vulture);⁹⁰ Faulkner distinguished this word ('ib3t-bird'; note here ib3y denoting a bird)⁹¹ from the insect name which he translated ('ib3yt wasp(?)').⁹² ib3yt may be derived from ib3 'dance' (Wb I, 62, 8-13: tanzen - compare the ib3w animal, Capra ibex nubiana) which could refer to the stately gait of the mantis; Keimer also compared the Ptolemaic term ibb applied to the scarab.⁹³

Remains of a mantis larva were found among bandages at Deir el-Medīna ; these were identified as belonging to the species Sphodromantis bioculata.⁹⁴ Störk also suggested Eremiaphila turcica as an identification of the ancient Egyptian mantis.⁹⁵

Grasshoppers,⁹⁶ snhm (Wb III, 461, 6-8 : die Heuschrecke), most frequently appear in Egyptian texts as indicative of large numbers⁹⁷ (particularly of the king's enemies).⁹⁸ Their destructiveness in the fields was also noted,⁹⁹ and writings of the term as s3-n-nhm 'son of seizing' pun on this characteristic.¹⁰⁰ Despite the obviously poor reputation of grasshoppers snhm occurs as a personal name.¹⁰¹

Grasshoppers are frequently depicted in tomb reliefs in the 'fishing and fowling' scenes,¹⁰² both flying (these forms were first identified as dragonflies)¹⁰³ and at rest. Keimer¹⁰⁴ compared these representations, and others, with the sht-snhm 'field of grasshoppers' mentioned in the Book of the Dead.¹⁰⁵ Grasshoppers appear to have been caught in nets, but for what reason is unknown¹⁰⁶ - snhm are not mentioned as ingredients in the medical texts.

As well as appearing with the tkkt (see above) the grasshopper occurs in the Pyramid Texts as one of the forms in which the deceased pharaoh might reach heaven. This wish ends with the phrase ny rʿ, which has been translated 'obliterating Rē',¹⁰⁷ and might refer to the obscuring of the sun by the swarming insects.¹⁰⁸ Keimer attributed to grasshoppers 'un rôle important dans les concepts religieux ou superstitieux', this opinion being supported by the occurrence of amuletic-type objects and rings bearing representations of the insects.¹⁰⁹

Keimer noted two further terms applied to grasshoppers in pharaonic Egypt, as well as several from Coptic. The first, b3, occurs in a phrase concerning sailing to Abydos,¹¹⁰ which may be compared with the ferrying of grasshoppers mentioned in P.Hearst.¹¹¹ Lefébure,¹¹² on the other hand, compared the term with the word ḥb3yt 'praying mantis' (see above). The second, w3dt, is inscribed on the back of certain grasshopper-shaped amulets; Keimer supposed it to mean 'green', literally 'die Papyrus-farbene'.¹¹³

The most common Coptic terms were Ⲭⲁⲛⲛⲉⲩ, translated 'grasshopper', derived from snhm,¹¹⁴ and ⲱⲗⲉ, translated 'locust', from demotic sd3.¹¹⁵ The terms 'grasshopper' and 'locust' describe groups of

the family Acrididae displaying either solitary (grasshoppers) or gregarious (locusts) habits.¹¹⁶ This distinction does not appear to have been made by the ancient Egyptians. Altogether, over 80 species of grasshopper and locust occur in Africa, including Egypt, today.¹¹⁷ Many species are very similar and isolating any of them from the reliefs is problematic. Despite this Keimer¹¹⁸ identified the grasshopper depicted in tomb scenes as the Desert Locust, Schistocerca gregaria Forskål, though considering another species, Anacridium aegyptium L,¹¹⁹ a further possibility, but not the prototype of the drawings. The former is distributed across Africa, Portugal and southern Spain, through the Middle East to north-western India; the latter is found throughout temperate regions.¹²⁰ It may be assumed from the very wide present-day distribution of the Migratory Locust, Locusta migratoria L, that this species was also found in ancient Egypt.¹²¹

Other insect pests mentioned by the ancient Egyptians are those which affected their persons - fleas, lice and other biting creatures. The flea,¹²² py (Wb I, 502, 2: der Floh), Pulex irritans, Coptic ⲡⲏⲓ,¹²³ was regarded, with the hnws (Wb III, 290, 2-3: ein stechendes Insekt : Mücke oä), as a proverbially insignificant creature.¹²⁴ Two methods for ridding a house of fleas are described in P. Ebers.¹²⁵ The flea was one of many animals whose form could be adopted by the deceased on his way to the next world.¹²⁶ The word is derived from pyw (see Prinzenges 6, 1), 'jump' which may itself be linked to an ancient root meaning 'fly'.¹²⁷ This etymology, and the determinative in the Coffin Texts, leaves little doubt as to the correctness of the translation.

Pwy appears also in a list of bird names on an ostrakon from the Ramesseum.¹²⁸ This is perhaps to be read 'flea' rather than p3yw 'bird' and the term which follows it and begins hn may be restored hn[ws] or hn[ms] (Wb III, 295, 12: die Mücke). Hnms is recorded elsewhere as an insect plaguing a soldier who is on duty away from Egypt, together with the dwt (Wb V, 552, 7: ein lästiges Insekt (neben Mücke); also read swt¹²⁹) and the hmy (Wb III, 281, 12: Sandfliege, die in die Füße sticht).¹³⁰ Hnms and hmy appear together again in a text describing the torments of a boatman while at work.¹³¹

Hnms and hnws were considered by Laucau (as by Wb) to be variants of the same word, derived from a root hnn 'sting'.¹³² This might accord well with the description of a heart complaint as hnws (Wb III, 290, 4: als Krankhafter Zustand des Herzens) - presumably a sharp, stinging

pain is intended.¹³³ Hnms has also been compared with hnm (Wb III, 292, 4-9: riechen, einatmen) 'smell'; the insect when biting or sucking blood would be seen as 'smelling' its victim.¹³⁴ The hnms is described as 'biting' in the medical texts¹³⁵ and may have pestered jackals (wnš) as well as man.¹³⁶ A hieroglyph in the 'opening of the mouth' texts should apparently - from the gloss - be read hn(w)s,¹³⁷ and certainly seems to have the appearance of a stinging insect.

Hmy is also attested in a late text describing the condition of people during floods,¹³⁸ as the flood waters rage around them they behave like hmy - presumably dispossessed and therefore frantic, like a scurrying insect. Caminos¹³⁹ associated the term with hm 'demolish, break through' and translated the phrase hmy n rdwy as a compound name 'leg-piercer'. This he believed to denote the 'sand-fly', as did Wb. The same root was taken by Meeks¹⁴⁰ to mean 'devour', and indeed hmy was originally compared with the Coptic name for the proverbially greedy pelican, Ⲛⲙⲏ.¹⁴¹ However, this name probably has a different etymology.¹⁴² The term dwt has received little attention; Caminos gave a 'conjectural rendering of "midge"'.¹⁴³

The ktt (not in Wb) is mentioned in the Coffin Texts as coming from a man's head¹⁴⁴ and, by comparison with Coptic ⲕⲁⲕⲧⲉ 'louse',¹⁴⁵ has been translated in the same way. The word also appears in a spell for preserving the deceased from decay and labour in the afterlife - the ktt is described as 'chewing' (wš()),¹⁴⁶ which might refer to their biting, or indicate that they were believed to infest corpses (compare hrrt above). The word's determinatives, which resemble that of the flea in the Coffin Texts to a greater or less degree, would seem appropriate to this meaning, and it seems reasonable to translate '(head)louse' - Pediculus humanus corporis de Geer, P.h.capitis de Geer. The word probably means nothing more than 'small' (Wb V, 147, 2-12: klein sein, klein)¹⁴⁷ and it is impossible to say whether ktt was applied to lice alone or other 'small' insects as well. The Egyptians apparently believed that they were eaten by flies (ʿff) - see above.

The centipede, spj, (Wb III, 441, 4-5: der Tausendfuß)¹⁴⁸ appears, despite the smallness of these creatures, as a deity,¹⁴⁹ and all attestations of spj as a noun should perhaps be understood in this way.¹⁵⁰ (A reference in the medical texts to 'centipede fat' should be deleted).¹⁵¹ The name may be derived from a word meaning 'to be flexible', 'to be jointed';¹⁵² the insect (identified by Brunner¹⁵³ as Scolopendra adhaerens Forskål) itself may have given its name to a

carrying chair with many porters (and thus many-legged).¹⁵⁴ Although the term has been compared with spj (Wb III, 440, 17-18: als Krankheitserreger)¹⁵⁵ it is unlikely that the two are identical, or even related.

A number of terms identified by Wb or others as the names of insects occur so infrequently in the texts that they cannot be translated. In some cases it is difficult to establish whether an insect or bird is intended as the general bird determinative was used of certain flying insects. It should not be forgotten, however, that the same name might be used of more than one animal - compare jbnn with both fish and bird determinative - and the comments below should be read in this light.

One text, for example, records the ttt (not in Wb) as being eaten by the hy-bird.¹⁵⁶ Although hy is attested several times as the name of a bird (even once apparently denoting all birds) its translation is not certain (see Ch.16: Birds of Prey). It is recorded elsewhere as eating 'sparrows' (?) - tt (Wb V, 413, 14-15: Sperling) - and ttt may be a variant writing of this, rather than 'an insect' as suggested by Shorter.¹⁵⁷ Some birds, such as the Hobby and Lesser Kestrel (both found in modern Egypt), eat both insects and small birds, which is unhelpful in the interpretation of ttt.

Ky (Wb V, 17, 2: die Vögel) might denote an insect rather than a bird. In a hymn to Amun, the creator is described as giving life to the fish in the river and the birds in the sky and 'creating that on which the hnws live, the ddft and pw likewise, creating provender for the pnw in their holes, giving life to the ky¹⁵⁸ in every tree'.¹⁵⁹ Since this part of the text is concerned with very small animals, and birds have already been mentioned in the usual place with fish, it seems unlikely that ky designates a bird.

The medical texts contain several such ambiguous terms. The lrhnnt (Wb I, 116, 3: ein Vogel oder ein Insekt) is mentioned together with its 'feather' (swt);¹⁶⁰ although this might suggest a bird it should be noted that the swt of a scarab beetle is also attested in the medical corpus (see above). Wb also suggested a reading tt-hnnt (the word has also been transcribed thwt)¹⁶¹ comparing the bird-name tt-h3 (Wb I, 142, 9: ...als Name eines Vogels). bbj (Wb I, 442, 11: Art Insekt(?)) is recorded together with its 'house',¹⁶² translated 'Nest',¹⁶³ in P. Ebers also. Wb. Drog. suggested 'Ob bbjw: eine Wespenart?'.¹⁶⁴

The blood (snf) of a hwr (Wb III, 56, 5: Art Vögel oder Insekt) is used together with the blood (snf) of a fly (ʿff) in a prescription to reduce swellings,¹⁶⁵ which might suggest that another insect is intended. Apart from the hwr, ʿff is the only insect the blood of which is used in the medical texts,¹⁶⁶ while the blood of several different birds (mnt, mnyt, nrt, smn, g3bqw) is attested. The phrase hwrw n ʿpdw 'den Schwachen unter den Vögeln' and the use of hwrt (Wb III, 56, 6) as an epithet of the vulture goddess of El-Kâb would also indicate that hwr is more likely to denote a bird than an insect.¹⁶⁷

Shyht (Wb IV, 210, 13: ein Insekt) may also be a variant of the variant sht (Wb IV, 209, 8) or shht (Wb IV, 209, 8), probably an Allen's Gallinule, Porphyryula alleni, depicted at Beni Hasan (see Ch.15: Waterbirds). The use of a long-legged bird in the treatment of part of a leg (m3st knee)¹⁶⁸ would seem appropriate though the use of whole birds is not attested elsewhere in the medical texts. 'One large scarab beetle' is prescribed (see above), and this might indicate that a large insect is intended by shyht. It may be that the shyht and sh(h)t shared some common feature, such as colouring, and thus shared the same name.¹⁶⁹

A further three insect names are indicated by the presence of insects as the determinatives of verbs. Sb (Wb III, 432, 12: von unfreundlicher Gesinnung... vgl. die Schreibung von sbw; the latter, Wb III, 433, 7-16, sometimes has a fish as determinative) shows a creature with antennae and four legs¹⁷⁰ (note that the 'bee' hieroglyph also shows four legs).¹⁷¹ K33 (not in Wb) shows a determinative like that of pw or kt in the Coffin Texts, varying with the 'leopard head' (Sign List F9).¹⁷² An insect with antennae and outstretched wings, identified as a butterfly, determines s3š (Wb III, 422, 7: Öffnen (von den Ohren)).¹⁷³ Keimer compared the verb sš 'open (of doors)' Wb III, 481, 14-482, 14: Öffnen, esp. 482, 1-4 (of doors)) noting the similarity in motion of the leaves of an Egyptian door and the wings of a butterfly at rest; he also noted that Egyptian representations show undivided wings, like the determinative.¹⁷⁴ Identification of the butterfly species depicted is difficult. Keimer suggested the African Monarch Butterfly, Danaus chrysippus; Vanessa sp has also been put forward (this genus includes the Red Admiral and Painted Lady).¹⁷⁵

Wb records a number of words with a scorpion¹⁷⁶ as determinative, of which whʿt (Wb I, 351, 1-2: Skorpion), var. whʿw,¹⁷⁷ and d3rt (Wb V, 526, 15-527, 5: Skorpion),¹⁷⁸ later dnry (Wb V, 577), are the most

common. Both these words may show the 'cow's-skin' as variant determinative.¹⁷⁹ Although scorpions appear to have been ranked with the ddft (see Ch.1: Classification) their place was clearly ambivalent, as the use of the usual 'mammal' determinative shows (compare writings of ṣṭw 'turtle', krr 'frog'), and they are discussed here with insects for convenience.

D3rt was the more ancient of the two words, being attested from the Old Kingdom onwards. Like wh't, it survived into Coptic (ⲉⲗⲏ 'scorpion',¹⁸⁰ Bohairic only). Unlike wh't it is attested as a personal name.¹⁸¹

The 'bites' (psḥ) of scorpions (d3rt) were warded off by medical prescriptions¹⁸² and by magical spells,¹⁸³ the latter being much more common - presumably no effective rational remedy could be found for scorpion stings.¹⁸⁴ In one text the stinging (ddb) of its tail' is mentioned.¹⁸⁵ It was also described as piercing (ddm - Wb V, 634, 19-20: stechen)¹⁸⁶ and causing stings (dm - cf Wb V, 449, 1-7: stechen).¹⁸⁷ Its tail was elsewhere called its 'horn',¹⁸⁸ a designation also found in ancient Mesopotamia.¹⁸⁹ In another text the scorpion (wh't) was described as having a 'long back and many joints'.¹⁹⁰

D3rt was often associated in the magical texts with other harmful beasts, notably snakes (hf3w, n'y), but also the crocodile, lion (m3i) or other wild animals (m3).¹⁹¹ Wh't likewise appears in many texts calling for protection from various creatures, especially the snake (hf3w) and crocodile (msh).¹⁹² Some texts include the scorpion ideogram without writing out a specific name.¹⁹³

The wh't is recorded as biting (psḥ),¹⁹⁴ raging (ṣpt),¹⁹⁵ and its poison (mtwt,¹⁹⁶ the same word as for the venom of a snake, or, more poetically, mw mr 'waters of illness',¹⁹⁷) is also mentioned. Some funerary texts only show scorpions in a mutilated form in order to render them harmless.¹⁹⁸ The term occurs usually in the New Kingdom and Ptolemaic texts, though a Middle Kingdom example is known.¹⁹⁹

The term wh't, Coptic ⲱϣⲟⲟⲩⲉ,²⁰⁰ may be derived from a root wh'c, 'prick, pierce' which is attested in the Metternich Stela as the action of a scorpion.²⁰¹ The word may be compared with the name of a fish (Synodontis sp) which has long 'piercing' dorsal spines. This term is attested from the Old Kingdom onwards (see Ch.18: Fish); wh't meaning 'scorpion' was evidently a later development.

Scorpions were associated with a number of deities,²⁰² notably Isis (the wh't)²⁰³ and Atum (the d3rt);²⁰⁴ an underworld daemon with scorpion head is also known.²⁰⁵ Selkis,²⁰⁶ Egyptian srkt, probably derived from a Semitic root meaning 'cut',²⁰⁷ was the appropriately named goddess whose 'Erscheinungsform' was a scorpion.

That d3rt and wh't were not entirely synonymous is indicated in the Late Period Metternich Stela where both appear in parallel with another animal, intš (Wb I, 102, 12: ein böses Tier (neben Schlange und Skorpion)).²⁰⁸ The wh't is described as 'pricking' (wh't), the d3rt as 'piercing' (ddb - Wb V, 632, 7-10: stechen - note also ddbt with scorpion determinative (Wb V, 632, 11: Skorpion), obviously, like wh't, a descriptive name for this animal)²⁰⁹ and the intš as 'lurking' (šn - Wb IV, 38, 4-8: warten, esp. 6: Auch vom Skorpion der auf den Vorbeigehenden lauert). 'intš and d3rt also occur together in one of the Chester Beatty texts.²¹⁰

Later in the Metternich stela the intš is mentioned after snakes;²¹¹ elsewhere scorpions were recorded in this position.²¹² If the intš were not a scorpion it must have been some very similar creature, but probably not a spider, as Gardiner²¹³ and Borghouts²¹⁴ translated (see above for shṭt, 'spider'), nor Drioton's 'insecte vénimeux'.²¹⁵

An interesting collection of words with scorpion determinatives is found in certain magical texts. The seven scorpions following Selkis,²¹⁶ or conjured by Isis,²¹⁷ have names with a magical significance: tfn(t)²¹⁸ (Wb V, 299, 7 : Names eines Skorpions), bfn(t) (Wb I, 456, 1-2 : Name eines Skorpions), ptt (Wb I, 566, 4 : Name eines Skorpions), mtt (Wb II, 33, 16: Name eines Skorpions), ttt (Wb V, 413, 5: Name eines Skorpions), mstt (Wb II, 152, 5: Name eines Skorpions) and msttf (Wb II, 152, 6). The use of labials, especially b and m, has been noted in the formation of magical words and names;²¹⁹ a similar string of words is found in a demotic magical papyrus.²²⁰ As these words are not attested elsewhere as denoting scorpions they should be understood merely as magical charms.²²¹

Bibliography

Works frequently cited in the thesis are given in both abbreviated and expanded forms; abbreviations adopted without alteration from Wb and Meeks, AL, are not included as they may easily be found by referring to those publications. For abbreviations of the titles of periodicals and series see the List of Abbreviations at the front of the thesis.

Sections 1 and 2 are not exhaustive. In many cases an article or monograph is concerned with only one or a few animals or animal names and full details of these may be found by reference to the index and the footnotes of the relevant chapters.

Dates given are of first editions and most recent editions used.

Section 1 : Egyptology and Related Subjects

AEO - see Gardiner.

AL - see Meeks.

Albright, VESO:

W.F.Albright, The Vocalisation of the Egyptian Syllabic Orthography (New Haven 1934): American Oriental Series 5.

Allam & Černý, Ostraka und Papyri:

S.Allam & J.Černý, Hieratische Ostraka und Papyri der Ramessidenzeit. Transkriptionen aus dem Nachlaß von J.Černý (Tübingen 1973): Urkunden zum Rechtsleben im alten Ägypten 1.

Allen, BOD:

T.G.Allen, The Book of the Dead or Going forth by Day (Chicago 1960, 1974).

Alliott, Culte d'Horus:

M.Alliott, Le Culte d'Horus à Edfou (Le Caire 1949): BdE 20.

Altenmüller, Zauberspruch:

H.Altenmüller, GM 33 (1979) 7-12: Ein Zauberspruch zum 'Schutz des Leibes'.

Andreu & Cauville, Vocabulaire:

G.Andreu & S.Cauville, RdE 29 (1977) 5-13: Vocabulaire absent du Wörterbuch I; RdE 30 (1978) 10-21: Vocabulaire absent du Wörterbuch II.

Assmann, Liturgische Lieder:

J.Assmann, Liturgische Lieder an den Sonnengott (Berlin 1969): MÄS 19.

BOD: See Totb Nav; Totb Leps; Allen, BOD; Barguet, LdM.

Badawy, Iteti:

A.Badawy, The Tombs of Iteti, Sekhemankhptah and Kaemnofret at Giza (Berkeley 1976).

Barguet, Famine:

P.Barguet, La Stèle de la Famine à Séhel (Le Caire 1953): BdE 24.

Barguet, LdM:

P.Barguet, Le Livre des Morts des anciens Égyptiens (Paris 1967): Littératures anciennes du Proche-Orient 1.

Baines & Málek, Atlas:

J.Baines & J.Málek, Atlas of Ancient Egypt (Oxford 1980).

Bakir, Cairo Calendar:

A. el-M.Bakir, The Cairo Calendar No.86637 (Cairo 1966).

Barnes, Five Ramesseum Papyri:

J.W.B.Barns, Five Ramesseum Papyri (Oxford 1956).

Barta, Opferformel:

W.Barta, Aufbau und Bedeutung der altägyptischen Opferformel (Glückstadt 1968): ÄF 24.

Barta, Opferliste:

W.Barta, Die altägyptische Opferliste von der Frühzeit bis zur griechisch-römischen Epoche (Berlin 1963): MÄS 3.

Barta, Selbsterzeugnis:

W.Barta, Das Selbstzeugnis eines altägyptischen Künstlers
(Stele Louvre-C14) (Berlin 1970): MÄS 22.

Bénédite, Carnarvon Ivory:

G.Bénédite, JEA 5 (1919) 1-5: The Carnarvon Ivory.
225-241: The Carnarvon Ivory II.

Bidoli, Fangnetze:

D.Bidoli, Die Sprüche der Fangnetze in den altägyptischen Sargtexten (Glückstadt 1976): Abhandlungen des DAIK, Ägyptische Reihe 9.

Bibl Aeg III:

R.O.Faulkner, The Papyrus Bremner-Rhind (Bruxelles 1933):
Bibliotheca Aegyptiaca 3.

Bibl Aeg VIII:

M.Sandman-Holmberg, Texts from the time of Akhenaten
(Bruxelles 1938): Bibliotheca Aegyptiaca 8.

Bierbrier, BM Texts:

M.Bierbrier, BM Hieroglyphic Texts from Egyptian Stelae etc,
pt 10 (London 1974).

Blackman/Davies, Westcar:

A.M.Blackman, The Story of King Kheops and the Magicians. Transcribed from Papyrus Westcar (Berlin Papyrus 3033) ed. for publication by W.V.Davies (Reading 1988).

Blok, Volksverhalen:

H.P.Blok, De beide Volksverhalen van Papyrus Harris 500 verso
(Leiden 1925).

Boessneck, Ägyptologie und Zoologie:

J.Boessneck, Gemeinsame Anliegen von Ägyptologie und Zoologie aus der Sicht des Zooarchäologen (München 1981): Bayerische Akademie der Wissenschaften Phil-hist K1 Heft 5.

Boessneck, Haustiere:

J.Boessneck, Die Haustiere in Ägypten (München 1953):
Veröffentlichungen der Zoologischen Staatssammlung, München 3.

Boessneck, Tierwelt:

J.Boessneck, Die Tierwelt des alten Ägypten (München 1988)

Bonnet, Reallexikon:

H.Bonnet, Reallexikon der ägyptischen Religionsgeschichte
(Berlin 1952).

Borchardt, Abusir:

L.Borchardt, ZÄS 38 (1900) 94-100: Vorläufiger Bericht über
die Ausgrabungen bei Abusir im Winter 1899/1900.

Boreaux, Guide - catalogue:

C.Boreaux, Musée national du Louvre. Département des
antiquités égyptiennes. Guide-catalogue sommaire (2 vols.)
(Paris 1932).

Borghouts, AEMT:

J.F.Borghouts, Ancient Egyptian Magical Texts (Leyde 1978).

Borghouts, P.Leiden I, 348:

J.F.Borghouts, OMRO 51 (1970) 1-248: The Magical Texts of
P.Leiden I, 348.

Botti, Sobk:

G.Botti, La glorificazione di Sobk e del Fayyum in un papiro
ieratico da Tebtynis (Copenhagen 1959): Analecta Aegyptiaca
8.

Botti & Peet, Giornale:

G.Botti & T.E.Peet, Il giornale della necropoli di Tebe
(Torino 1928).

Brewer, D.J. & R.F.Friedman, Fish and Fishing in Ancient Egypt. The
Natural History of Egypt 2 (Warminster 1989).

Brugsch, Wörterbuch:

H.Brugsch, Hieroglyphisches-Demotisches Wörterbuch (7 vols.)
(Leipzig 1867-1882).

Brunner, Geburt:

H.Brunner, Die Geburt des Gottkönigs. Studien zur Überlieferung eines altägyptischen Mythos (Wiesbaden 1964): Ägyptologische Abhandlungen 10.

Brunner, Lehre des Cheti:

H.Brunner, Die Lehre des Cheti (Glückstadt & Hamburg): ÄF 13.

Brunner-Traut, Bildostraka:

E.Brunner-Traut, Die altägyptischen Scherbenbilder - Bildostraka - der Deutschen Museen (Wiesbaden 1956).

Bruyère, D el M 1930:

B.Bruyère, Rapport sur les fouilles de Deir el Médineh 1930 (Le Caire 1933): FIFAO 83.

De Buck, CT:

A.de Buck, The Egyptian Coffin Texts (7 vols.) (Chicago 1935-1961).

Budge, Dictionary:

E.A.T.W.Budge, An Egyptian hieroglyphic dictionary (London 1920).

Budge, Facsimiles:

E.A.T.W.Budge, Facsimiles of Egyptian hieratic papyri in the British Museum; with descriptions, summaries of contents, etc. (London 1910-1923).

Budge, Greenfield Papyrus:

E.A.T.W.Budge, The Greenfield Papyrus in the British Museum; the funerary papyrus of Princess Nesitanebtashru... about B.C.970 (London 1912).

Burchardt, Fremdworte:

M.Burchardt, Die altkanaanäischen Fremdworte und Eigennamen im Ägyptischen (2 vols.) (Leipzig 1909-10).

CD - see Crum.

COA - see Pendlebury; Peet.

CT - see de Buck.

Caminoš, Fishing & Fowling:

See Caminoš - Literary Fragments (Ch.1).

Caminoš, LEM:

R.A.Caminoš, Late Egyptian Miscellanies (London 1954).

Caminoš, Literary Fragments:

R.A.Caminoš, Literary Fragments in the Hieratic Script (Oxford 1956).

Caminoš, Ibrim:

R.A.Caminoš, The Shrines and Rock Inscriptions of Ibrim (London 1968): Archaeological Survey of Egypt 32.

Caminoš, Tale of Woe:

R.A.Caminoš, A Tale of Woe (Oxford 1977).

Caminoš, Temples of Buhen:

R.A.Caminoš, The New Kingdom Temples of Buhen I (London 1974);
II (London 1974).

Capart, Primitive Art:

J.Capart, tr. & rev. A.S.Griffith, Primitive art in Egypt (London 1905).

Carter & Mace, Tomb of TutAnkh-Amen:

H.Carter & A.C.Mace, The Tomb of Tut-Ankh-Amen, discovered by the late Earl of Carnarvon and Howard Carter I (London 1923)

Carter & Newberry, Tomb of T.IV:

H.Carter & P.E.Newberry, The Tomb of Thoutmōsis IV (Westminster 1904): Catalogue générale des Antiquités égyptiennes du Musée du Caire.

Černý, CED:

J.Černý, Coptic Etymological Dictionary (Cambridge 1976).

Černý, (O.DelM):

J.Černý, Ostraca hiératiques I & II (Le Caire 1935): Catalogue générale des Antiquités égyptiennes du Musée du Caire.

Černý, (O.DelM):

J.Černý, Catalogue des ostraca hiératiques non-littéraires de Deir el-Médineh (Le Caire 1935).

Chabas, Papyrus Magique Harris:

F.Chabas, Le Papyrus magique Harris (Chalon-sur-Saône 1860).

Chassinat, Papyrus Médicale Copte:

E.Chassinat, MIFAO 26 (1921): Le Papyrus Médicale Copte.

Chicago Assyrian Dictionary:

The Assyrian Dictionary of the Oriental Institute of the University of Chicago I-(Chicago & Glückstadt 1956-).

Clère & Vandier, Textes de la ^{1ère} période Intermédiaire:

J.-J.Clère & J.Vandier, Textes de la première période intermédiaire (Bruxelles 1948): Bibliotheca Aegyptiaca 10.

Condon, Seven Royal Hymns:

V.Condon, Seven Royal Hymns of the Ramesside Period (Munich 1978).

Crum, CD:

W.E.Crum, A Coptic Dictionary (Oxford 1939, reprint 1979).

DGI - see Wb, Düm Geogr Inschr.

DHI - see Wb, Düm Hist Inschr.

Daressy, Cercueils:

G.Daressy, Cercueils des cachettes royales ([Le Caire] 1909): Catalogue générale des Antiquités égyptiennes du Musée du Caire.

Davies, Five Theban Tombs:

N.de G.Davies, Five Theban Tombs; being those of Mentuherkhepshef, User, Daga, Nehemawäy and Tati (London 1913): Archaeological Survey of Egypt 21.

Davies & Gardiner, Seven Private Tombs:

N.de G.Davies, ed. A.H.Gardiner, Seven Private tombs at Kurnah
(London 1948): Mond Excavations at Thebes 2.

Davies, Rekhmire:

N.de G.Davies, The Tomb of Rekh-mi-Rē' at Thebes (2 vols.)
(New York 1943): Publications of the Metropolitan Museum of Art 11.

Davies, Two Sculptors:

N.de G.Davies, The tomb of the two sculptors at Thebes (New York 1925).

Davies, Birds and Bats:

N.M.Davies, JEA 35 (1949) 13-20: Birds and Bats at Beni Hasan.

Davies, Paintings:

N.M.Davies, Ancient Egyptian Paintings (Chicago 1936).

Davies et al., Saqqara Tombs I:

W.D.Davies, A. el-Khouli, A.B.Lloyd & A.J.Spencer, Saqqara Tombs I : The Mastabas of Mereri and Wernu (London 1984).

Deir el-Bahri - see Wb, Deirelb (11. Dyn).

Dévéria, Cat mss du Louvre:

T.Dévéria, Catalogue des mss. égyptiens... conservés au musée égyptien du Louvre (Paris 1881).

Dümichen, Grabpalast:

J.Dümichen, Der Grabpalast des Pataumenap in der Thebanischen Nekropolis... (3 vols.) (Leipzig 1884-94).

Dunham, Giza Mastabas I:

D.Dunham & W.K.Simpson, Giza Mastabas I : The Mastaba of Queen Meryesankh III : G7530-7540 (Boston 1974).

Dürst, Rinder:

J.U.Dürst, Die Rinder von Babylonien, Assyrien und Ägypten (Berlin 1899).

Ebbell, Krankheiten:

B.Ebbell, Altägyptische Bezeichnungen für Krankheiten und Symptome (Oslo 1938).

Ebbell, P.Ebers:

B.Ebbell, The Papyrus Ebers, the greatest Egyptian medical document (London and Copenhagen 1937).

Ebers, P.Ebers:

G.Ebers, Papyrus Ebers, Die Maase und das Kapitel über die Augenkrankheiten (Leipzig 1889).

Edel, Inschriften Niuserre:

E.Edel, Zu den Inschriften auf dem Jahreszeitenreliefs der <Weltkammer> aus dem Sonnenheiligtum des Niuserre (Göttingen 1961, 1963): NAWG 1.

Edel & Wenig, Jahreszeitenreliefs:

E.Edel & S.Wenig ed., Die Jahreszeitenreliefs aus dem Sonnenheiligtum des Königs Ne-user-Re (Berlin 1974): Staatliche Museen zu Berlin: Mitteilungen aus der ägyptischen Sammlung 7.

Edgerton & Wilson, Hist Rec Ram III:

W.F.Edgerton & J.A.Wilson, The Historical records of Ramesses III : the texts in Medinet Habu Volumes 1 & 2 (Chicago 1936).

Epron & Wild, Ti:

L.Epron, MIFAO 65 (1939): Le tombeau de Ti, fascicule P : dessins et aquarelles...

Erichsen, DG:

W.Erichsen, Demotisches Glossar (Kopenhagen 1954).

Erman, Gebete:

A.Erman, ZÄS 38 (1900) 19-41: Gebete eines ungerecht Verfolgtem und andere Ostraka aus den Königsgräbern.

Erman, Reden und Rufe:

A.Erman, Reden, Rufe und Lieder auf Gräberbildern des alten Reiches (Berlin 1919).

Erman & Grapow, Handwörterbuch:

A. Erman & H.Grapow, Ägyptisches Handwörterbuch (Berlin 1921).

Erman & Grapow, Wb:

A.Erman & H.Grapow, Wörterbuch der ägyptischen Sprache (7 vols.) (Leipzig 1926-63).

Erman & Ranke, Ägypten:

A.Erman rev. ed. H.Ranke, Ägypten und ägyptisches Leben im Altertum (Tübingen 1923).

Faulkner, AEPT:

R.O.Faulkner, The Ancient Egyptian Pyramid Texts (Oxford 1969).

Faulkner, Concise Dictionary:

R.O.Faulkner, A Concise Dictionary of Middle Egyptian (Oxford 1962).

Firth & Gunn, Teti Pyramid Cemeteries:

C.M.Firth & B.Gunn, Teti Pyramid Cemeteries (2 vols. in 1) (Le Caire 1926).

Fischer, Diminishing Progression:

H.G.Fischer, JARCE 10 (1973) 5-9: Further Evidence for the Logic of Ancient Egyptian: Diminishing Progression.

Fischer, Orientation of Hieroglyphs:

H.G.Fischer, The Orientation of Hieroglyphs, Part 1 (New York 1977): Egyptian Studies 2.

Fischer-Elfert, P.Anastasi I:

H.W.Fischer-Elfert, Die Satirische Streitschrift des Papyrus Anastasi I. Übersetzung und Kommentar (Wiesbaden 1986): Ägyptologische Abhandlungen Band 44 Textzusammenstellung (Wiesbaden 1983): Kleine Ägyptische Texte.

Five Theban Tombs - see Davies.

Gaillard, Poissons:

C.Gaillard² (with V.Loret & C.Kuentz) MIFAO 15 (1923):
Recherches sur les poissons représentés dans quelques tombeaux
égyptiens de l'Ancien Empire.

Gaillard, Tatonnements:

C.Gaillard, Revue d'Ethnographie et de Sociologie 11-12 (1912)
1-20: Les tâtonnements des égyptiens de l'Ancien Empire à la
recherche des animaux à domestiquer.

Gamer-Wallert, Fische:

I.Gamer-Wallert, Fische und Fischkulte im alten Ägypten
(Wiesbaden 1970).

Gardiner, P.Chester Beatty I:

A.H.Gardiner, The Library of A.Chester Beatty... The Chester
Beatty Papyri No.1 (London 1931).

Gardiner, AEO:

A.H.Gardiner, Ancient Egyptian Onomastica (2 vols.) (London
1947).

Gardiner, HO:

A.H.Gardiner & J.Černý, Hieratic Ostraca I (Oxford 1957).

Gardiner, HPBM:

A.H.Gardiner ed., Hieratic Papyri in the British Museum. Third
series. Chester Beatty Gift ([London] 1935).

Gardiner, Late Egyptian Stories:

A.H.Gardiner, Late Egyptian Stories (Bruxelles 1932):
Bibliotheca Aegyptica I.

Gardiner, RAD:

A.H.Gardiner, Ramesside Administrative Documents (London 1940,
1948).

Gardiner, Ramesseum Papyri:

A.H.Gardiner, The Ramesseum Papyri (Oxford 1955).

Gardiner, Sign List:

A.H.Gardiner, Egyptian Grammar. Being an introduction to the study of hieroglyphs (Oxford 1927, 1979). Sign List on p.438-543.

Gardiner, Theban Ostraca:

A.H.Gardiner et al., Theban ostraca; edited from the originals, now mainly in the Royal Ontario Museum of archaeology, Toronto and the Bodleian Library, Oxford (London 1913).

Gardiner, Wilbour Papyri:

A.H.Gardiner ed., The Wilbour Papyri I (Plates); II (Commentary); III (Translation) (Oxford 1941-48); IV (Index) (London 1952) by R.O.Faulkner.

Gardiner & Černý, Sinai II:

J.Černý ed. A.H.Gardiner & T.E.Peet, The Inscriptions of Sinai pt 2 (London 1955).

Gauthier, Dictionnaire:

H.Gauthier, Dictionnaire des noms géographiques contenus dans les textes hiéroglyphiques (Le Caire 1927).

Gesenius, Lexicon:

W.Gesenius (tr. E.Robinson), A Hebrew and English Lexicon of the Old Testament (Oxford 1907, 1972).

Ghalioungui, House of Life:

P.Ghalioungui, The House of Life : magic and medical science in ancient Egypt (Amsterdam 1973, 1st ed. London 1963).

Ghalioungui, Médecine:

P.Ghalioungui, La médecine des Pharaons : magie et science médicale dans l'Égypte ancienne (Paris 1983).

Ghoneim, Rind:

W.Ghoneim, Die ökonomische Bedeutung des Rindes im alten Ägypten (Bonn 1977).

Goedicke, Dispute:

H.Goedicke, The Report about the Dispute of a man with his BA.
Papyrus Berlin 3024 (Baltimore & London 1970).

Goedicke, Königliche Dokumente:

H.Goedicke, Königliche Dokumente aus dem alten Reich
(Wiesbaden 1967).

Goedicke, O.Mich:

H.Goedicke & E.F.Wente, Ostraka Michaelides (Wiesbaden 1962).

Goedicke, Wenamón:

H.Goedicke, The Report of Wenamón (Baltimore 1975).

Goyon, P.Brooklyn 47.218.138:

J.C.Goyon, JEA 57 (1971) 154-159: Un parallèle tardif d'une
formule des inscriptions de la statue prophylactique de Ramsès
III au Musée de Caire (Papyrus Brooklyn 47.218.138).

Goyon, Confirmation:

J.C.Goyon, Confirmation du pouvoir royal au nouvel an :
Brooklyn Museum Papyrus 47.218:50 (2 vols.)(Le Caire 1972-74).

Goyon, Dieux Gardiens:

J.C.Goyon, Les dieux-gardiens et la genèse des temples,
d'après les textes égyptiens de l'époque gréco-romaine... (Le
Caire 1985): BdE 93.

Grapow, Bildliche Ausdrücke:

H.Grapow, Die bildlichen Ausdrücke des Ägyptischen vom Denken
und Dichten einer altorientischen Sprache (Leipzig 1924).

Greene, Fouilles:

J.B.Greene, Fouilles exécutées à Thebes dans l'année 1855;
textes hiéroglyphiques et documents inédits (Paris 1855).

Griffith & Thompson, Demotic Magical Papyrus:

F.L.Griffith & H.Thompson, The demotic magical papyrus of
London and Leiden (3 vols.) (London 1904-1909).

Griffith, Rylands:

F.L.Griffith, Catalogue of the demotic Papyri in the John Rylands Library, Manchester, with facsimiles & complete translations (3 vols.) (Manchester 1909).

Guglielmi, Reden:

W.Guglielmi, Reden, Rufe und Lieder (Bonn 1973).

Gwyn Griffiths, Horus and Seth:

J.Gwyn Griffiths, The Conflict of Horus and Seth, from Egyptian and classical sources: a study in ancient mythology (Liverpool 1960): Liverpool Monographs in Archaeology and Oriental Studies.

Gwyn Griffiths, Plutarch:

J.Gwyn Griffiths, Plutarch. De Iside et Osiride ([Cardiff] 1970).

HO - see Gardiner & Černý.

Habachi, Tavole:

L.Habachi, Tavole d'offerta are e bacili da libagione n.22001-22067 (Torino 1977): Catalogo del Museo Egizio di Torino: Ser.2, Collezioni 2.

Harris, Lex. Stud:

J.R.Harris, Lexicographical Studies in Ancient Egyptian Minerals (Berlin 1961).

Hartmann, Systematischen Aufzählung:

R.Hartmann, ZÄS 2 (1864) 7-12 & 19-28: Versuch zu einer systematischen Aufzählung der von den alten Ägyptern bildlich dargestellten Thiere.

Hassan, Excavations at Saqqara (1937-1938):

S.Hassan, ASAE 38 (1938) 503-521: Excavations at Saqqara (1937-1938).

Hassan, Giza:

S.Hassan, Excavations at Giza (Oxford 1932-60).

Hayes, Scepter:

W.Hayes, The Scepter of Egypt (2 vols.) (Cambridge, Mass. 1953-1959).

Helck, Beziehungen:

W.Helck, Die Beziehungen Ägyptens zu Vorderasien im 3. und 2. Jahrtausend v.Chr. (Wiesbaden 1962, 1971).

Helck, Kleine Texte I - see Helck - Prophezeiung.

Helck, Lehre des Dw3-Hty:

H.W.Helck, Die Lehre des Dw3-Hty : Textzusammenstellung (Wiesbaden 1970).

Helck, Materialien:

H.W.Helck, Materialien zur Wirtschaftsgeschichte des Neuen Reiches (Wiesbaden 1961-65).

Helck, Militärführer:

W.Helck, Der Einfluß der Militärführer der 18. ägyptischen Dynastie (Hildesheim 1964): Unt. zur Geschichte und Altertumskunde Ägyptens 14.

Helck, Prophezeiung:

H.W.Helck, Die Prophezeiung des Nfr.tj: Text-zusammenstellung (Wiesbaden 1970): Kleine ägyptische Texte.

Helck, Wirtschaftsgeschichte:

H.Helck, Wirtschaftsgeschichte des alten Ägypten im 3. und 2. Jahrtausend vor Chr. (Leiden 1975): Handbuch der Orientalistik Abt. 1, Bd. 1, Abschrift 5.

Herodotus - see Lloyd.

Hilzheimer, M, Zeitschrift für Säugetierkunde 1 (1926) 140-169: Säugetierkunde und Archäologie.

Hommages Sauneron:

J.Vercoutter ed., Hommages à la mémoire de Serge Sauneron, 1927-1976 ([Cairo] 1979): BdE 81 & 82.

Hommages Vermaseren:

Hommages à Maarten J. Vermaseren (3 vols.) (Leyde 1978).

Hornung, Amduat:

E. Hornung, Das Amduat. Die Schrift des verborgenen Raumes (Wiesbaden 1963).

Hornung, Anbetung:

E. Hornung, Das Buch der Anbetung des Re im Westen - Sonnenlitanei; nach den Versionen des Neuen Reiches hrsg. (2 vols.) (Basel 1975-77): Aegyptiaca helvetica 2-3.

Hornung, Pforten:

E. Hornung, Das Buch von den Pforten des Jenseits; nach den Versionen des Neuen Reiches hrsg. (2 vols.) (Genève 1980-1984): Aegyptiaca helvetica 87-88.

Hornung & Staehelin, Skarabäen:

E. Hornung & E. Staehelin, Skarabäen und andere Siegelamulette aus Basler Sammlungen (Mainz 1976): Ägyptische Denkmäler in der Schweiz 1.

Houlihan & Goodman, Birds:

P. F. Houlihan & H. Goodman, The Birds of Ancient Egypt (Warminster 1986): The Natural History of Egypt 1.

Hülshoff, Igel:

V. von Droste zu Hülshoff, Der Igel im ältesten Ägypten (Hildesheim 1980): HAB 11.

v. d. Horst, Chaeremon:

P. W. v. d. Horst, Chaeremon, Egyptian Priest and Stoic Philosopher (Leiden 1984).

Iversen, Hieroglyphic Dictionary:

E. Iversen, Fragments of a hieroglyphic dictionary (København 1958).

James, BM Texts:

T. G. H. James, BM Hieroglyphic Texts from Egyptian Stelae etc pt 1 (2nd ed: London 1961) pt 9 (London 1970).

James, Hekanakhte:

T.G.H.James, The Hekanakhte Papers and other early Middle Kingdom Documents (New York 1962).

Jacquet-Gordon, Noms des Domaines Funéraires:

H.K.Jacquet-Gordon, Les noms des domaines funéraires sous l'ancien empire égyptien (Le Caire 1962): BdE 34.

Janssen, J.M.A., L.M.J.Zonhoven, Annual Egyptological Bibliography 1947-1978 (Leiden 1948 - Warminster 1987).

Janssen, Commodity Prices:

J.J.Janssen, Commodity Prices from the Ramesside Period (Leiden 1975).

Janssen, Ships' Logs:

J.J.Janssen, Two Ancient Egyptian Ships' Logs (Leiden 1961).

Jelínková-Reymond, Djed-Her:

E.A.E.Jelínková-Reymond, Les inscriptions de la statue guérisseuse de Djed-Her-le-Sauveur (Le Caire 1956): BdE 23.

Jéquier, Frises:

G.Jéquier, MIFAO 47 (1921): Les frises d'objets des sarcophages du Moyen Empire.

Jéquier, Matériaux:

G.Jéquier, BIFAO 19 (1922) 1-271: Matériaux pour servir à l'établissement d'un dictionnaire d'archéologie égyptienne.

Junker, Giza:

H.Junker, Giza : Bericht über die von der Akad. der Wissenschaften, Wien... Grabungen auf dem Friedhof des alten Reiches bei den Pyramiden von Giza 1-12 (1929-1956).

Junker, Onurislegende:

J.Junker, Die Onurislegende (Wien 1917): Kaiserliche Akademie der Wissenschaften in Wien phil-hist Klasse Denkschriften

Kaplony, Frühzeit:

P.Kaplony, Die Inschriften der ägyptischen Frühzeit (Wiesbaden 1963): Ägyptologische Abhandlungen 8.

Kaplony, Kleine Beiträge:

P.Kaplony, Kleine Beiträge zu den Inschriften der ägyptischen Frühzeit (Wiesbaden 1966): Ägyptologische Abhandlungen 15.

Kees, Götterglaube:

H.Kees, Der Götterglaube im alten Ägypten (Leipzig 1941, Berlin 1956, 1977).

Kees, Kulturgeschichte:

(A. Alt ed.) H.Kees, Kulturgeschichte des alten Orients I: Ägypten (München 1933).

Kees, Opfertanz:

H.Kees, Der Opfertanz des ägyptischen Königs (Leipzig 1912).

Kees, Tieropfer:

H.Kees, NAWG, Phil-hist Kl 78 (1942): Bemerkungen zum Tieropfer der Ägypter und seiner Symbolik.

Keimer, Pendeloques:

L.Keimer, Pendeloques en formes d'insectes faisant partie des colliers égyptiens, later published as: Insectes de l'Égypte ancienne: études égyptologiques publiées de 1931 à 1937 dans les Annales du Service des Antiquités de l'Égypte (Le Caire 1938).

Keller, Antike Tierwelt:

O.Keller, Die antike Tierwelt I: Säugetiere (Leipzig 1909) II: Vögel ... (Leipzig 1913).

Klebs, Reliefs AR/MR/NR:

L.Klebs, Reliefs und Malereien des Alten Reiches/Mittleren Reiches/Neuen Reiches (Heidelberg 1915-1934).

Koenig, (Cat) Jarres Hiératiques:

Y.Koenig, Catalogue des étiquettes de jarres hiératiques de Deir el-Médineh Nos.6000-6241 Fascicule ([Le Caire] 1979): IFAO Documents des Fouilles 21/1.

Koenig, P.Boulaq VI:

Y.Koenig, Lē Papyrus Boulaq 6 ([Le Caire] 1981): BdE 87.

Kuentz, Kadesh:

C.M.Kuentz, MIFAO 55 (1928): La bataille de Qadech: les textes et bas-reliefs.

L.Krzyzaniak, BSFE 96 (1983) 4-13: Les débuts de la domestication des animaux et des plantes dans les pays du Nil.

LÄ:

W.Helck & E.Otto / W.Westendorf ed., Lexikon der Ägyptologie I-VI (Wiesbaden 1975-1986).

LES - see Gardiner

LSJ:

H.G.Liddell & R.Scott, rev. ed. H.S.Jones, A Greek-English Lexicon (Oxford 1843, 1940, repr. 1966).

Lacau, Études Égyptologiques:

P.Lacau, Études d'égyptologie I: Phonétique égyptienne ancienne; II: Morphologie (Le Caire 1970-72).

Lacau, Sarcophages:

P.Lacau, Sarcophages antérieurs au nouvel empire I (Le Caire 1904) II (Le Caire 1906).

Landsberger, Fauna of Ancient Mesopotamia:

B.Landsberger, The Fauna of Ancient Mesopotamia I : Tablet XIII (Roma 1960): MSL 8, 1.

Lange, Hermonthis:

H.O.Lange, SPAW 38 (1914) 991-1004: Eine neue Inschrift aus Hermonthis.

Lanzone, Dizionario:

R.V.Lanzone, Dizionario di mitologica egizia I-III (Torino 1881-86) IV (repr. Amsterdam 1975).

Leahy, Malkata... The Inscriptions:

M.A. Leahy, Excavations at Malkata and the Birket Habu 1971-1974 under the direction of David B. O'Connor and Barry J. Kemp. The Inscriptions (Warminster 1978): Egyptology Today No.2, Volume IV. The University Museum of University of Pennsylvania Egyptian Expedition.

Leclant, Montuemhat:

J. Leclant, Montuemhat, quatrième prophète d'Amon (Le Caire 1961) : BdE 35.

Lepsius, Auswahl:

K.R. Lepsius, Auswahl der wichtigsten Urkunden des ägyptischen Altertums : Tafeln (Leipzig 1842).

Lesko, Book of Two Ways:

L.H. Lesko, The Ancient Egyptian Book of Two Ways (Berkeley, Los Angeles & London 1972).

Lesko, Dictionary LE:

L.H. Lesko ed., A Dictionary of Late Egyptian I-V (Berkeley, Ca. 1982-1990).

Lichtheim, Literature:

M. Lichtheim, Ancient Egyptian Literature: a book of readings, I : The Old and Middle Kingdoms (Berkeley 1973).

Lloyd, Herodotus:

A.B. Lloyd, Herodotus Book II (Leiden 1976): Études préliminaires aux religions orientales dans l'Empire Romain 43.

Lopez, Ostraca I, II, III:

J. Lopez, Ostraca hieratici I, N.57001-57092 (Milano 1978) ; II, N.57093-57319 ; III, N.57320-57449 (Milano 1982).

Loret, Faune pharaonique:

V. Loret, ZÄS 30 (1892) 24-30: Notes sur la faune pharaonique.

Lortet & Gaillard, Faune momifiée (A; B):

L.Lortet & C.Gaillard, La faune momifiée de l'ancienne Égypte
(2 vols.) (Lyon 1905-1909): Archives du musée d'histoire
naturelle 8, 9, 10.

LRL:

J.Černý, Late Ramesside Letters (Bruxelles 1939): Bibliotheca
Aegyptiaca IX

Macramallah, Idout:

R.Macramallah, Le Mastaba d'Idout (Le Caire 1935): SAE
Fouilles à Saqqara.

Man & Cattle:

F.E.Zeuner & A.E.Mourant ed., Man and Cattle. Proceedings of a
Symposium on Domestication at the Royal Anthropological
Institute 24-26 May 1960 (London 1963).

Martin, Hetepka:

G.T.Martin, The tombs of Hetepka, and other reliefs and
inscriptions from the Sacred Animal Necropolis, North Saqqara,
1964-73 (London 1979): Texts from Excavations, (EES) memoir 4.

Maspero, Amenemhêt:

G.Maspero, L'enseignement d'Amenemhêt (Le Caire 1923): BdE 6.

Maspero, Hymne au Nil:

G.Maspero, Hymne au Nil (Le Caire 1912): BdE 5.

Maspero, Mission en Italie:

G.Maspero, Rapport sur une mission en Italie (Paris 1881).

Massart, P.Leid I 343+345:

A.Massart, The Leiden Magical Papyrus, I 343 & I 345 (Leiden
1954): Oudheidkundige Mededelingen, Suppl.NR.34.

Maystre, Déclarations d'innocence:

C.Maystre, Les déclarations d'innocence (Le Caire 1937).

Meeks, AL:

D.Meeks, Année Lexicographique. Égypte ancienne 1 (1977)
(Paris 1980); 2 (1978) (Paris 1981); 3 (1979) (Paris 1982).

Mélanges Maspero:

MIFAO 66 (1934): Mélanges Maspero I : Orient ancien (parts 1-4, 3 vols).

Miscellanea Gregoriana:

Miscellanea Gregoriana raccolta di scritti pubblicati nel I centenario dalla Fondazione de Pont. Museo Egizio, 1839-1939 (Vatican 1941).

Mogensen, Mastaba Egyptien:

M.Mogensen, Le mastaba égyptien de la glyptothèque ny Carlsberg (Copenhague 1921).

Mogensen, Ny Carlsberg:

M.Mogensen, La glyptothèque ny Carlsberg: La collection égyptienne (2 vols.) (Copenhague 1930).

Möller, Paläographie:

W.M.Möller, Hieratische Paläographie I: Alt-und Mittelhieratisch (Leipzig 1909) II: Neuhieratisch (Leipzig 1909).

Montet, P., BIFAO 11 (1914) 39-48: Les poissons employés dans l'écriture hiéroglyphique.

Montet, Boeufs égyptiens:

P.Montet, Kêmi 13 (1954) 43-58: Les boeufs égyptiens.

Montet, Fruit défendu:

P.Montet, Kêmi 11 (1950) 85-116: Le fruit défendu.

Montet, Notes de lexicographie:

P.Montet, Kêmi I (1928) 3-18: Notes de lexicographie égyptienne à propos du Wörterbuch der Ägyptischen Sprache publié par MM Erman et Grapow.

Montet, Scènes:

P.Montet, Les Scènes de la vie privée dans les tombeaux égyptiens de l'Ancien Empire (Strasburg 1925).

Morenz, Naturlehre:

S.Morenz, WZKM 54 (1957) 119-129: Eine "Naturlehre" in den Sargtexten.

MuK:

A.Erman, Zaubersprüche für Mutter und Kind aus Papyrus Berlin 3027 (Berlin-1901).

Myśliwiec, Atum:

K.Myśliwiec, Studien zum Gott Atum I: Die heiligen Tiere des Atum (Hildesheim 1978): HÄB 5; II: Name, Epitheta, Ikonographie (Hildesheim 1979): HÄB 6.

Naville, Mythe d'Horus:

E.H.Naville, Textes relatifs au Mythe d'Horus recueillis dans le temple d'Edfou (Genève 1870).

Naville, Store City of Pithom:

E.Naville, The store-city of Pithom and the route of the Exodus (London 1903).

Neugebauer & Parker, Astronomical Texts:

O.Neugebauer & R.A.Parker, Egyptian Astronomical Texts I: The Early Decans (London 1960): Brown Egyptological Studies 3; II The Ramesside Star Clocks (Providence 1964): Brown Egyptological Studies 5.

O.Cairo - see Černý.

O. DelM - see Černý, Posener, Sauneron.

O.Mich - see Goedicke

Opet:

C. de Wit, Les inscriptions du temple d'Opet, à Karnak (Bruxelles 1958-62): Bibl Aeg XI, XII.

Osing, Nominalbildung:

J.Osing, Die Nominalbildung des Ägyptischen (2 vols.) (Mainz 1976).

P.Anastasi I - see Fischer-Elfert; Gardiner.

P.Brooklyn 47.218.50 - see Goyon.

P.Ch.B. I-XI - see Gardiner.

P.DelM:

J.Černý, Papyrus hiératiques de Deir el-Médīneh I (nos.I-VII)
(Le Caire 1978).

P.Geneva MAH 15274 - see Goyon.

P.Jumilhac - see Vandier.

P.Leid I 343 - see Massart.

P.Leid I 343+345 - see Massart.

P.Leid I 345 - see Massart.

P. Ram(esseum) I-V - see Barns; X - see Gardiner.

Paton, Animals:

D.Paton, Animals of Ancient Egypt : Materials for a 'Sign
List' of Egyptian hieroglyphs 'E' (Princeton, N.J. 1925).

Peet T.E. & C.L.Woolley, The City of Akhenaten I : Excavations of 1921
& 1922 at El-'Amarnah (London 1923): EES memoir 38.

Pendlebury J.D.S., The City of Akhenaten II: The North Suburb and the
desert altars, the excavations at Tell el Amarna during the
seasons 1926-1932 (London 1933); III: The central city and the
official quarters, the excavations at Tell el Amarna during
the seasons 1926-27 and 1931-36 (London 1951).

Petrie, Amulets:

W.M.F.Petrie, Amulets; illustrated by the Egyptian Collection
in University College, London (London 1914).

Petrie, Diospolis Parva:

Diospolis Parva. The Cemeteries of Abadiyeh and Hu, 1898-9
(London 1901).

Petrie, Koptos:

W.M.F.Petrie, Koptos (London 1896).

Petrie, Nagada & Ballas:

W.M.F.Petrie, Nagada and Ballas (London 1896).

Petrie, Tanis:

W.M.F.Petrie, Tanis Pt 1 (2nd ed. London 1889): Egypt Exploration Fund Memoirs 2.

Petrie, Tombs of the Courtiers:

W.M.F.Petrie, Tombs of the courtiers and Oxyrhynchos (London 1925): British School of Archaeology in Egypt 37.

Piankoff, Litany:

A.Piankoff, The Litany of Re (New York 1964): Bollingen series 40.

Piankoff, Pyramid Texts:

A.Piankoff, The Pyramid of Unas : texts... (Princeton, N.J. 1968): Bollingen series 40: Egyptian religious texts and representations 5.

Piankoff, Querrets:

A.Piankoff, Le livre des Querrets (Le Caire 1946): Extraits du BIFAO T.41, 42, 43, 45.

Pliny, Nat.Hist:

H.Rackham, W.H.S.Jones, D.E.Eichholz, Pliny: Natural History, in 10 volumes with an English translation I-X (London & Cambridge, Ma. 1938 (repr. 1967)-1962).

Plutarch - see Gwyn Griffiths.

Posener G., Catalogue des ostraca hiératiques littéraires de Deir el-Médineh Fasc 1-3 (Le Caire 1934-38): IFAO Documents des Fouilles I.

Posener G., Catalogue des ostraca hiératiques littéraires de Deir el-Médineh Nos.1109-1266 (Le Caire 1951-1972) Nos.1267-1675 (Le Caire 1977-1980).

Posener, L'enseignement loyaliste:

G.Posener, L'enseignement loyaliste (Genève 1976).

Posener-Kriéger & de Cenival, HPBM 5th ser:

P.Posener-Kriéger & J.L. de Cenival, Hieratic Papyri in the British Museum, Fifth series: The Abu Sir papyri (London 1968)

Polotsky:

H.J.Polotsky, Zu den Inschriften der 11.Dynastie (Leipzig 1929): Unt XI:

Pritchard, ANET:

J.B.Pritchard, Ancient Near Eastern Texts Relating to the Old Testament (Princeton, N.J. 1969, 1950).

Quibell, Hierakonpolis:

J.E.Quibell, Hierakonpolis pt.1 (London 1900): Egyptian research account 4th memoir.

Quibell, Saqqara 1907-8:

J.E.Quibell, Excavations at Saqqara, 1907-08:... (Le Caire 1909).

RAD - see Gardiner.

Randall-MacIver & Woolley, Buhen:

D.Randall-MacIver & C.L.Woolley, Buhen (Philadelphia 1911):
Eckley B.Coxe, Junior Expedition to Nubia 7-8,
Vol.I - II.

Ranke, PN:

H.Ranke, Die ägyptischen Personennamen (2 vols.) (Glückstadt 1935, 1952).

Ranke, Tiernamen:

H.Ranke, ZÄS 60 (1925) 76-83: Tiernamen als Personennamen bei den Ägyptern.

Reisner, Excavations at Kerma:

G.A.Reisner, Excavations at Kerma 1-4 (2v) (Cambridge, Mass. 1923) : HAS 5 & 6.

Reisner, Giza Necropolis:

G.Reisner, A History of the Giza Necropolis I (Cambridge, Mass. etc 1942) II (Cambridge, Mass. etc 1955).

Rekhmire - see Wb, Rekhmara; also Davies.

Ricke, Geflügelhof:

H.Ricke, ZÄS 73 (1937) 124-131: Das Geflügelhof des Amon in Karnak.

Roccati, P.ieratico 54003:

A.Roccati, Papiro ieratico n.54003. Estratti magici e rituali del primo Medio Regno (Torino 1970) Catalogo del Museo Egizio di Torino, Serie 1, vol.2.

Roeder, Naos:

G.Roeder, Naos (Leipzig 1914)

Roeder, Religion:

G.Roeder, Urkunden zur Religion des alten Ägypten ([no place] 1914).

Sander-Hansen, Anchnesneferibre:

C.E.Sander-Hansen, Die religiösen Texte auf dem Sarg der Anchnesneferibre (Kopenhagen 1937).

Sander-Hansen, Metternich:

C.E.Sander-Hansen, Die Texte der Metternichstele (New York 1956).

S.Sauneron, Catalogue des Ostraca hiératiques non littéraires de Deir el-Médineh, nos.550-623 (Le Caire 1959).

Sauneron, Papyrus magique illustré:

S.Sauneron, Le Papyrus magique illustré de Brooklyn [Brooklyn Museum 47.218.156] (New York 1970).

Säve-Söderbergh, Ägypten und Nubien:

T.Säve-Söderbergh, Ägypten und Nubien:... Geschichte altägyptischer Aussenpolitik (Lund 1941).

Schäfer, Principles:

H.Schäfer, Von ägyptischer Kunst: eine Grundlage (Leipzig 1930), tr. J.Baines ed., Principles of Egyptian Art (Oxford 1974)

Scharff, Altertümer:

A.Scharff, Altertümer der Vor- und Frühzeit (2 vols.) (Berlin 1929-31). ~~1929-31~~

Scharff, Streitgespräch:

A.Scharff, Der Bericht über das Streitgespräch eines Lebensmüden mit seiner Seele (München 1937): SBAW 9.

Schneider & Raven, De egyptische oudheid:

H.D.Schneider & M.J.Raven, De egyptische oudheid: een inleiding aan de hand van de egyptische verzameling in het Rijksmuseum van Oudheid te Leiden ('s-Gravenhage 1981).

Schweitzer, Löwe:

U.Schweitzer, Löwe und Sphinx im alten Ägypten (Glückstadt & Hamburg 1948): ÄF 15.

Sethe, Lesestücke:

K.H.Sethe, Ägyptische Lesestücke zum Gebrauch im akademischen Unterricht (Leipzig rev. ed. 1928): Texte des Mittleren Reiches
2

Sethe, U u K:

K.Sethe, Übersetzung und Kommentar zu den altägyptischen Pyramidentexten I-IV (Glückstadt [no date]) V (Hamburg 1962).

Shorter, Pr(t)-m-hrw:

A.W.Shorter, Catalogue of Egyptian Religious Papyri in the British Museum : Copies of the Book Pr(t)-m-hrw from the XVIIth to the XXIInd dynasty I, Description of Papyri with text (London 1938).

Siegeshymnus - see Spiegelberg.

Simpson, Giza Mastabas:

W.K.Simpson, Giza Mastabas II: The Mastabas of Qar and Idu (Boston 1978); III: The Mastabas of Kawab, Khafkhufu I and II (Boston 1980).

Simpson, Papyrus Reisner II:

W.K.Simpson, Papyrus Reisner II (Boston 1965).

Spiegelberg, Correspondances:

W.Spiegelberg, Correspondances du temps des rois-prêtres...
(Paris 1895):=

Spiegelberg, Graffiti:

W.Spiegelberg, Ägyptische und andere Graffiti aus der Thebanischen Nekropolis (Heidelberg 1921).

Spiegelberg, Ostraka:

W.Spiegelberg, Hieratic Ostraka & Papyri found by J.E.Quibell in the Ramesseum 1895-6 (London 1898).

Spiegelberg, Siegeshymnus:

W.Spiegelberg, ZÄS 34 (1896) 1-25: Der Siegeshymnus des Merneptah auf der Flinders Petrie-Stele.

Stern, P.Ebers:

L.Stern, Papyrus Ebers: das hermetische Buch über die Arzneimittel der alten Ägypter in hieroglyphischer Schrift... Mit hieroglyphisch-lateinischen Glossar ([no place] 1875).

Stevenson Smith, Art & Architecture:

W.Stevenson Smith, The Art & Architecture of ancient Egypt (Harmondsworth 1958): Pelican history of art 14.

Stevenson Smith, Interconnections:

W.Stevenson Smith, Interconnections in the Ancient Near East : a study of the relationships between the arts of Egypt, the Aegean, and Western Asia (New Haven & London 1965).

Störk, Nashorn:

L.Störk, Die Nashörner : Verbreitungs- und kulturgeschichtliche Materialien unter besonderer Berücksichtigung der afrikanischen Arten und des altägyptischen Kulturbereiches (Hamburg 1977).

Studies Griffith:

Studies presented to F. Ll. Griffith (London 1932):

Suys, Fellah Plaideur:

E.Suys, Étude sur le conte du Fellah Plaideur (Roma 1933): AnOr 5.

Thausing & Kerszt-Kratschmann, Totenbuch:

C.Thausing & T.Kerszt-Kratschmann, Das große ägyptische Totenbuch (Kairo 1969).

Top Bibl:

B.Porter & R.L.B.Moss, Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings

I The Theban Necropolis pt 1 (Oxford 1927)

pt 2 (Oxford 1964)

II Theban Temples (Oxford 1929, 1972)

III Memphis pt 1 (Oxford 1931)

rev. ed. J.Malek pt.2 (Oxford 1981)

IV Lower and Middle Egypt (Oxford 1934)

V Upper Egypt: Sites (Oxford 1937)

VI Upper Egypt: Chief Temples (Oxford 1939)

VII Nubia, The Deserts, and Outside Egypt (Oxford 1951)

Vandier, Manuel:

J.Vandier, Manuel d'archéologie égyptienne (6 vols.) (Paris 1952-78).

Vandier, Mo'alla:

J.Vandier, Mo'alla: La tombe d'Ankhtifi et la tombe de Sébekhotep (Le Caire 1950): BdE 18.

Vandier, P.Jumilhac:

J.Vandier, Le Papyrus Jumilhac (Paris 1962).

Vandier d'Abbadie, Ostraca figurés:

J.Vandier d'Abbadie, Catalogue des ostraca figurés de Deir el Médineh (3 vols.) (Le Caire 1936-1959): Documents des fouilles d'IFAO 2, i-iv.

Vandier d'Abbadie, Singes... AE/ME/NE:

J.Vandier d'Abbadie, RdE 16 (1964) 147-177: Les singes familiers dans l'ancienne Égypte (Peintures et bas-reliefs) I. L'Ancien Empire; RdE 17 (1965) 177-187: II. Le Moyen Empire; RdE 18 (1966) 143-201: III. Le Nouvel Empire.

Vycichl, Dictionnaire:

W.Vycichl, Dictionnaire étymologique de la langue copte (Leuven 1983).

Wb - see Erman.

Wb.Drog. IV-VII:

H.von Deines, H.Grapow & W.Westendorf, Übersetzung der medizinischen Texte; idem, Erläuterungen; H.Grapow, Die medizinischen Texte in hieroglyphischer Umschreibung autographiert; H.von Deines & H.Grapow, Wörterbuch der ägyptischen Drogennamen; H.von Deines & W.Westendorf, Wörterbuch der medizinischen Texte (2 vols.) (Berlin 1958-1962); Grundriss der Medizin der alten Ägypter IV-VII.

Weeks, Egyptology and the Social Sciences:

K.R.Weeks, Egyptology and the Social Sciences: Five Studies (Cairo 1979).

Weigall, Rock Drawings of Nubia:

A.E.P.B.Weigall, A report on the antiquities of Lower Nubia - the first cataract to the Sudan frontier - and their condition in 1906-7 (Oxford 1907).

Weill, Sinai:

R.Weill, Recueil des Inscriptions égyptiennes du Sinaï (Paris 1904).

Welch, Lebensmüde:

E.D.Welch, The Lebensmüde and its relationship to the hedonistic harpers' songs of the Middle - New Kingdoms (Thesis 1978).

Westendorf, Handwörterbuch:

W.Westendorf, Koptisches Handwörterbuch (Heidelberg 1965-77).

Wilkinson, Manners and Customs:

J.G.Wilkinson, A Second Series of The Manners and Customs of the Ancient Egyptians (3 vols.) (London 1841-1878)

Winkler, Rock Drawings of Southern Upper Egypt:

H.A.Winkler, Rock Drawings of Southern Upper Egypt: Sir R. Mond Desert Expedition, seasons 1936-38 (2 vols.) (London 1938-39); Archaeological Survey of Egypt.

De Wit, Lion:

C.de Wit, Le rôle et le sens du lion dans l'Égypte ancienne
(Leiden 1951):

Wolf, Die Kunst Ägyptens:

W.Wolf, Die Kunst Ägyptens. Gestalt und Geschichte (Stuttgart
1957).

Wreszinski, Atlas:

W.Wreszinski, Atlas zur altägyptischen Kulturgeschichte
(Leipzig 1923-36).

Zába, Ptahhotep:

Z.Zába, Les maximes de Ptahhotep (Prague 1956).

Zandee, Hymnen:

J.Zandee, De Hymnen aan Amon van Papyrus Leiden I, 350 (Leiden
1948).

Zivie, Giza:

C.M.Zivie, Giza au deuxième millénaire ([Cairo] [1976]): BdE
70.

Section 2 : Zoology

(For works concerned specifically with the animals of ancient Egypt see
Section 1.)

J.Anderson, Zoology of Egypt : Reptilia and Batrachia (London 1898).

Anderson, Mammalia:

J.Anderson, Zoology of Egypt : Mammalia (London 1902).

H.G.Andrewartha & L.C.Birch, The Distribution & Abundance of Animals
(Chicago 1954).

Birds of Africa I-II (see Brown et al., Urban et al.)

Boulenger, Fishes of the Nile:

G.A.Boulenger, Zoology of Egypt : The Fishes of the Nile (2
volumes) (London 1907)

Brehm, Tierleben:

A.E.Brehm rev. ed L.Heck & M.Hilzheimer, Brehm's Tierleben. Die Säugetiere (4-vols.) (Leipzig & Vienna 1912-1916).

L.H.Brown, E.K.Urban, K.Newman, The Birds of Africa I (London/New York 1982).

Burton, Systematic Dictionary:

M.Burton, A Systematic Dictionary of Mammals of the World (London, 2nd ed 1965).

BWP (see Cramp et al.).

D.Chapman & N.Chapman, Fallow Deer. Their History, Distribution and Biology (Lavenham, Suffolk 1975).

Clutton-Brock et al, Red Deer:

T.H.Clutton-Brock, F.E.Guinness & S.D.Albon, Red Deer. Behavior and Ecology of Two Sexes (Edinburgh 1982).

Corbet & Hill, World List of Mammalian Species:

G.B.Corbet and J.E.Hill, A World List of Mammalian Species (London 1986).

G.B.Corbet, The Mammals of the Palaearctic Region: A taxonomic review (London & Ithaca 1978).

S.Cramp et al. eds., Handbook of the Birds of Europe, the Middle East and North Africa. The Birds of the Western Palearctic

I: Ostrich to Duck (Oxford 1977)

II: Hawks to Bustards (Oxford, London & New York 1980)

III: Waders to Gulls (Oxford, London & New York 1983)

IV: Terns to Woodpeckers (Oxford & New York 1985)

V: Tyrant Flycatchers to Thrushes (Oxford & New York 1988)

Darlington, Zooogeography:

P.J.Darlington, Zooogeography: the geographical distribution of animals (New York 1957).

Dorst & Dandelot, Mammals of Africa:

J.Dorst & P.Dandelot, A Field Guide to the Large Mammals of Africa (London 1972).

Field Guide: see Petersen et al.

Flower, Mammals of Egypt:

S.S.Flower, Proceedings of the Zoological Society of London
(1932) 369-450 : Notes on the Recent Mammals of Egypt.

Flower, Reptiles:

S.S.Flower, Proceedings of the Zoological Society of London
(1933) 735-851: Notes on the recent reptiles and amphibians of
Egypt, with a list of species recorded from that Kingdom.

Grzimek, Animal Life Encyclopaedia:

B.Grzimek ed. Grzimek's animal life encyclopaedia (13 vols.)
(New York & c 1968-1974).

Haltenorth & Diller, Mammals of Africa:

T.Haltenorth & H.Diller, tr. R.W.Hayman, A Field Guide to the
Mammals of Africa including Madagascar (München 1977, London
1980).

Honacki et al, Mammal Species of the World:

J.H.Honacki, K.E.Kinman, J.W.Koepl, Mammal Species of the
World. A taxonomic and geographic reference (Lawrence Ka.
1982).

Hilzheimer, Schakale:

M.Hilzheimer, Zoologica 53 (1908) 1-111: Beitrag zur Kenntnis
der nordafrikanischen Schackale.

Hoogstraal, Mammals of Egypt I-III:

H.Hoogstraal, Journal of the Egyptian Public Health
Association 37 (1962) 143-162: A brief review of the
contemporary land mammals of Egypt (including Sinai) I:
Insectivora and Chiroptera.

Journal of the Egyptian Public Health Association 38 (1963) 1-
35: A brief review of the contemporary land mammals of Egypt
(including Sinai) II: Lagomorpha and Rodentia.

Journal of the Egyptian Public Health Association 39 (1964)
205-239: A brief review of the contemporary land mammals of
Egypt (including Sinai) III: Carnivora, Hyracoidea,
Perissodactyla and Artiodactyla.

Hufnagl, Libyan Mammals:

E.Hufnagl, Libyan Mammals (Wisconsin 1972).

Joleaud, Ruminants Cervicornes:

L. Joleaud, MIE 27 (1935): Les ruminants cervicornes d'Afrique.

Kingdon, East African Mammals:

J.Kingdon, East African Mammals. An Atlas of Evolution in Africa

I (Primates etc.) (London & New York 1971)

IIA (Insectivores and Bats) (London & New York 1974)

IIB (Hares and Rodents) (London & New York 1974)

IIIA (Carnivores) (London & New York 1977)

IIIB (Large Mammals) (London, New York & San Fransisco 1979)

IIIC (Bovids) (London, New York & San Fransisco 1982)

IIID (Bovids) (London, New York & San Fransisco 1982)

MacDonald, Encyclopaedia of Mammals I-II:

D.MacDonald, ed., The Encyclopaedia of Mammals I (London 1984)

II (Oxford 1984).

Mackworth-Praed & Grant, Birds I-II:

C.W.Mackworth-Praed & C.B.H.Grant, Birds of Eastern and North-eastern Africa (2 vols) (London & New York; I 1952, 1957 repr.1981; II London 1960): African Handbook of Birds Series I.

R.Petersen et al., A Field Guide to the Birds of Britain and Europe (London 1954).

Schaller, Mountain Monarchs:

G.B.Schaller, Mountain Monarchs: Wild Sheep and Goats of the Himalayas (Chicago 1977).

Setzer, Egyptian Rodents:

H.W.Setzer, Journal of the Egyptian Public Health Association 38 (1963) 51-60: Notes on some Egyptian Rodents.

H.W.Setzer, Proceedings of the United States National Museum 106 (1956)

447-587: Mammals of the Anglo-Egyptian Sudan.

G.G.Simpson, Bulletin of the American Museum of Natural History 85 (1945): The Principles of Classification and a Classification of Mammals.

G.Sterba, Freshwater Fishes of the World (London 1962; 1st publ. as Süsswasserfische aus aller Welt, Leipzig/Jena 1959).

Times Atlas:

The Times, Atlas of the World, Comprehensive Edition (London 1967, 1985).

Setzer, Mammals of Sudan:

H.W.Setzer, Proc. US Nat. Mus 106 (1956) 447-587: Mammals of the Anglo-Egyptian Sudan.

P.J.Ucko & G.W.Dimbleby ed., The Domestication and Exploitation of Plants and Animals (London 1969): Research Seminar in Archaeology and Related Subjects.

E.K.Urban, C.H.Fry, S.Keith, The Birds of Africa II (London/New York 1986).

Walker, Mammals of the World:

E.P.Walker, Mammals of the World (3 volumes) (London 1964; 1968 rev. ed. by J.L.Paradiso 1975) latest ed. as R.M.Nowak & J.L.Paradiso, Walker's Mammals of the World (2 volumes) (Baltimore & London 1983).

Wassif & Hoogstraal, Mammals of South Sinai:

W.Wassif & H.Hoogstraal, Proceedings of the Egyptian Academy of Science 9 (1953) 63-79: The Mammals of south Sinai, Egypt.

Zeuner, Domesticated Animals: F.E.Zeuner, A History of Domesticated Animals (London 1963).

Section 3 : Folk Biological Classification.

B.Berlin, Annual Review of Ecology and Systematics 4 (1973) 259-271: Folk systematics in relation to biological classification and nomenclature.

- B.Berlin, D.E.Breedlove & P.H.Raven, American Anthropologist 70 (1968) 290-299: Covert categories and folk taxonomies.
- idem, American Anthropologist 75 (1973) 214-242: General Principles of Classification and Nomenclature in Folk Biology.
- idem, Science 154 (1966) 273-275: Folk taxonomies and biological classification.
- idem, Science 174 (1971) 1210-1213: The Origins of Taxonomy.
- C.H.Brown, American Anthropologist 81 (1979) 791-817: Folk zoological life forms: their universality and growth.
- R.N.H.Bulmer, Man 2 (1967) 5-25: Why is the cassowary not a bird? A problem of zoological taxonomy among the Karam of the New Guinea highlands.
- idem, Social Science Information 13, 4/5 (1974) 9-28: Folk Biology in the New Guinea Highlands.
- idem & M.J.Tyler, Journal of the Polynesian Society 77 (1968) 333-385: Karam classification of frogs.
- H.C.Conklin, Folk Classification : A topically arranged bibliography of contemporary and background references through 1971 (Yale 1972, New Haven 1980) esp. p.329-362: Ethnozoology.
- J.M.Diamond, Science 151 (1966) 1102-1104: Zoological Classification System of a Primitive People.
- J.W.D.Dougherty, American Ethnologist 5 (1978) 66-80: Salience and Relativity in Classification.
- E.Durkheim & M.Mauss, tr. R.Needham, Primitive Classification (London 1963, 1969; first publ. as De quelques formes primitives de la classification in Année Sociologique 1901-1902).
- P.D.Dwyer, American Ethnologist 3 (1976) 425-445: An analysis of Rofaifo mammal taxonomy.

E.E.Evans-Pritchard, Man 63 (1963) 139-142: Notes on some animals in Zandeland.

E.S.Hunn, American Ethnologist 3 (1976) 508-524: Towards a perceptual model of folk classification.

idem, Tzeltal Folk Zoology : The Classification of Discontinuities in Nature (New York 1977)

P.Kay, Language 47 (1971) 866-867: Taxonomy and Semantic Contrast.

E.H.Lenneberg ed., New Directions in the Study of Language (Cambridge, Ma. 1964) esp. p.23-63: E.Leach, Anthropological Aspects of Language: Animal Categories and Verbal Abuse.

W.C.McCormack & S.A.Wurm, Language and thought : Anthropological Issues (The Hague 1977) esp. p.171-183: Y.Lemaitre, Tahitian Ethnozoological Classification and fuzzy logic, and p.185-190: J.P.Lebeuf, On an African classificatory system.

N.Perchonock & O.Werner, Ethnology 8 (1969) 229-242: Navaho systems of classification : Some implications for ethnosience.

E.Rosch et al., Cognitive Psychology 8 (1976) 382-439: Basic Objects in Natural Categories.

P.M.Taylor, Tobelorese Ethnobiology: The Folk Classification of Biotic Forms (Thesis 1980).

Section 4 : The Climate of Ancient Egypt

J.A.Allen ed., The Sahara. Ecological Change and Early Economic History (Outwell, 1981), esp. p.1-4: J.A.Allen, Introduction and p.29-34: A.Gauthier, Late Pleistocene and Recent Climatic Changes in the Egyptian Sahara: A Summary of Research.

A.J.Arkill & P.J.Ucko, Current Anthropology 6 (1965) 145-166: Reviews of Predynastic development in the Nile Valley.

- L.de Beaufort, Zoogeography of the Land and Inland Waters (London 1951).
- B.Bell, AJA 75 (1971) 1-26: The Dark Ages in Ancient History: 1. The first dark age in Egypt.
- B.Bell, AJA 79 (1975) 223-269: Climate and the History of Egypt: Middle Kingdom (Summary, p.223-224).
- B.Bell, Geographical Journal (1970) 569-573: The oldest records of the Nile floods.
- K.W.Butzer, Early hydraulic civilization in Egypt. A Study in Cultural Ecology (Chicago & London 1976).
- K.W.Butzer, Geographical Journal 125 (1959) 75-79: Some recent geographical deposits in the Egyptian Nile Valley.
- Cambridge Ancient History I, esp. Ch.2, 66-69: K.W.Butzer, Prehistoric Geography of Egypt and the Nile Valley.
- R.W.Fairbridge, Kush 11 (1963) 96-107: Nile Sedimentation above Wadi Halfa during the last 20,000 years.
- R.W.Fairbridge, Nature 196 (1962) 108-110: New Radiocarbon dates of Nile sediments.
- A.Goudie, Environmental change (Oxford 1977, 1983).
- C.V.Haynes & H.Haas, Radiocarbon 22 (1980) 705-717: Radiocarbon evidence for holocene recharge of groundwater, Western Desert, Egypt.
- W.F.Hume, A Preliminary Report on the Geology of the Eastern Desert of Egypt between latitude 22°N and 25°N (Cairo 1907): Ministry of Finance Survey Department Paper.
- W.F.Hume, Geology of Egypt 1: The Surface Features of Egypt (Cairo 1925).
- S.A.Huzayyin, MIE 43 (1941): The Place of Egypt in Prehistory.

H.H.Lamb, Climate, History and the Modern World (London 1982).

A.J.Mills, ASAE 68 (1982) 71-78: The Dakhleh Oasis Project: A Report on the first two seasons.

G.W.Murray, Geographical Journal 117 (1951) 422-434: The Egyptian Climate: An historical outline.

A.Nibbi, ASAE 63 (1979) 143-154: The 'Trees and Towns' Palette.

A.Nibbi, JEA 62 (1976) 45-56: Remarks on the two stelae from the Wadi Gasus.

A.Nibbi, Palestine Exploration Quarterly (1981) 89-99: A fresh look at the Egyptian environment of the Pharaonic period.

R.Raikes, Water, weather and prehistory (London 1967).

J.Rzóska, Euphrates and Tigris, Mesopotamian Ecology and Destiny (The Hague etc 1980).

J.Rzóska, The Nile: Biology of an Ancient River (The Hague 1976): Monographiae Biologicae 29.

K.S.Sandford, Geographical Review 26 (1936) 67-76: Problems of the Nile Valley.

B.D.Shaw, World Archaeology 8 (1976) 133-148: Climate, environment and prehistory in the Sahara.

I.G.Simmons, Biogeography: natural and cultural (London 1979).

F.Wendorf & R.Schild, Prehistory of the Eastern Desert (New York, London et al. 1980), esp. Ch.1; Ch.6; Appendix 4 by A.Gauthier.

F.Wendorf & R.Schild, Prehistory of the Nile Valley (New York, London &c, 1976) esp. App. G by A.Gauthier, App. H by A.Gauthier, App. I by A.Gauthier, App. J by P.H.Greenwood & E.J.Todd.

F.Wendorf & A.E.Marks ed., Problems in Prehistory: North Africa and the Levant (Dallas 1975) esp. p.7-9: R.Said, The Geological Evolution of the River Nile, and p.389-410: K.W.Butzer, Patterns of Environmental change in the Near East during late Pleistocene and Early Holocene Times.

R.G.West, Pleistocene Geology and Biology (London 1968, 1977).

F.White, The Vegetation of Africa. A descriptive memoir to accompany the Unesco/AET FAT/UNSO vegetation map of Africa (Paris, 1983)

M.A.J.Williams & H.Faure, The Sahara and the Nile (Rotterdam 1980) esp. Ch.9, p.207-224: M.A.J.Williams & F.M.Williams, Evolution of the Nile Basin, Ch.14, p.339-359: D.A.Livingstone, Environmental changes in the Nile headwaters, Ch.16, p.407-419: F.Wendorf and F.A.Hassan, Holocene ecology and prehistory in the Egyptian Sahara.

Index

(Page numbers refer to Volume 1 only)

	<u>Page</u>		<u>Page</u>
3	125	lb3w (baboon)	77
3yš - see š3		lb1b-t3	77
3by - see also b3	72-73	lbb	161
~ mh	72	lbnn - see 3bnn (bird)	
~ šm'	72	lbr	65
3bw	55-56	lbk3 - see also bk3t	
3bnn (bird)	136	lb-t3	77
3bnn (fish)	142	lbtrsw	86
3bk (demotic)	135	lph	82
3bt - see l3bt		lfy	77
3bdw	140-141	lmt	24
3ph - see lph		lmy-k3r	77
3pd	12-14	lmyw-b'h	15
3m'	116	lmyw-mw	15
3ms (verb)	35	lmy-htt - see htt (baboon)	
3ht	120	lm(w)	115,116
3s	129	lmr	67
3d	154	lms3 (lmtr?)	136
3dyt	150	lmsk3	140
		lmt	143
l3wt - see 'wt		lnb (bird)	136
l3bt	136	lnb (Caracal)	71
l3r	71	lnr	145
ly	142	lnh	86
l'n and varr.	76-78	lnt	140
lw (dog)	50-52	lntš	168
lw (young hartebeest)	22	lry (deer)	25
		lry (sheep)	84
lw3 (cattle)	35-38	lryw-pt	12
lw3 (fish)	142	lryt	34
lw3t	37	lrw (var. lryt)	45
lwlw - see lw		lrb3 (not an animal)	56
lw'w3 - see 'w'		lrhnnt	165
lb - see lnb		lrtqr	117
lb	60	lrt (bird)	133
lb3yt (bird?)	161	lrt (fish)	143
lb3yt (insect)	161	lh	32
lb3w (Barbary Sheep)	23	lht	32-33

	<u>Page</u>		<u>Page</u>
ǝhr - see hryt		ǝnh (goat)	59
ǝš - see š3		ǝnh (beetle)	158
ǝkw-n-t3	159	ǝnhyt	150
ǝknw (snake)	150	ǝnt - see ǝrt	
ǝknw (baboon)	77	ǝr	60-61
ǝt-hǝw	119	ǝrǝ	87
ǝtn	144	ǝh3	139
ǝth	43	ǝh3w	119
ǝtǝt	165	ǝhy	129
ǝd	43	ǝhǝw	136
ǝdyt - see hmt		ǝhm	129
ǝdw	136	ǝhtr (ǝhs3 ?)	136
ǝdr	10	ǝš3 (bird)	132
		ǝš3 (lizard)	151
ǝ3	65-66	ǝšw	142
~ hmw	66	ǝšǝ - see ǝšw	
ǝ3tm	62	ǝšǝš - see ǝšw	
ǝǝnt	132	ǝk	117
ǝw	121-122	ǝd (fish)	140, 142
ǝw	136	ǝd (mongoose)	87-88
ǝwbbw	142		
ǝwt	9-11	w	137
~ hdt, ndst	10, 59	w3pt	84
ǝb3	131	w3r	138
ǝbǝ - see ǝb3		w3st	50
ǝbw - see ǝb3		w3d (bird)	114
ǝbb	158	w3d (fish) - see wd	
ǝbnh	152	w3d3d	136
ǝbhn - see ǝbnh		w3d-h3t	114
ǝpy	158	wǝst	116
ǝpwy	83	wǝwyt	147
ǝpnnt	146-147	wǝb-r	45
ǝpš3y	158	wǝty	61
ǝpšwt - see ǝpš3y		wfǝ	150
ǝfy - see ǝff		wn - see wnwn	
ǝff	159-160	wnwn	114
ǝmǝm	86-87	wnmw	38, 42
ǝmryt	35	wnn - see wnwn	
ǝnǝrt	146-147	wnš	46-47, 48-49
ǝnnbw	136	wn-t3	77
ǝnhbt	123-124	wnd(y)t	41

	<u>Page</u>		<u>Page</u>
wndw (cattle)	41	bwt	144
wndw (goat)	61-62	bf (?)	79
wr (swallow)	133	bfñ	47,49
wr (unknown)	88	bfñt	168
wrw	34	bn	118
wrt	34	bnw (bird)	118-119
wrdw (fnd-n-nwb)	113	bnw (baboon) - see bnty	
whrt	53	bnbn - see bnw	
wh'(t) (fish)	139	bñg	123
wh't (bird) see also włst	115	bnty	77
wh't (scorpion)	166-168	br	141,142
whswt	88	bñwy - see bñn	
wsr	50	bñwt	137
wš33w	62	bñn	47
wš3t	116	bñs	39
wšb	45	bñst	39
wšft	73	bs	144
wšt - see wšft		bsy	77
wt	50	bsbs	113-114
wđ	140	bsñt	144
wđ'	121	bł3t	35
wđ'yt	144	bg (fish)	140,142
wđw	45	bg (unknown)	88
wđf	136	btñn	142
		btw	147-148
b3 (insect) see also łb3yt	162	bdñn - see btñn	
b3 (bird)	122-123	bd3	114
b3 (sheep)	83,84	bdw	114-115,131
b3 (Leopard) see also 3by	71-72		
~šm'	71	p	113
b3y (fish)	143	p3yw (birds)	12
b3y (insect)	160	p3yw (snake?)	145
b3w	142	p3yt	12
b3hrt	142	p3w	142
b3g - see bg (fish)		p3ñnt (not an animal name)	144
b3-t3	77	p3kr	143
błw	160	p3tt	77
błbl - see also b3y	165	py	163
błn - see bnw		p'3 - see p'rt	
błk	126	p'rt	134-135
błt	160	pnw	88-90

	<u>Page</u>		<u>Page</u>
pn ^h i	143	mnt	130-131
pnd	147	mr	44
pr	137	mrwryt	123-124
pry	45	mrt	143
prt	90	mr ^h w	45
pr ^{tr} sw - see i ^b trsw		m ^h yt	34
ph (not an animal name)	144	mhr	34
ph - see pht		mht	159
pht	113	m ^h - see m ^h hd	
ps ^d ty - see hnt (pelican) (notes)		m ^h yt	15
p ^k r ^h	27,90	m ^h w	153
pggt	152	m ^h sw	92
ptr	68	ms(w)	39,65,138
ptt	168	msw - see ms(y)t	
pth - see pht		ms(y)t	109-110
p ^d t	43	msrt - see ms(y)t	
		msh	153-154
fnt	148	mstt	168
f	149	msttf	168
		ms	137
m (owl)	125	mtw	149
m (waterbird) - see also i ^m	115	mtt	168
m ³ (animal)	11		
m ³ (oryx) - see m ³ hd		n ¹ z(w)	23-24
m ³ i(t)	69,71	n ¹ w	133-134
~ h ³ s(t)	69-70	n ¹ y	150
m ³ (?)	110	n ¹ w - see n ¹ y	
m ³ wd (not an animal name)	20	n ¹ r	139
m ³ -n-r ¹	77	nw (bird) - see nwr	
m ³ hd	21-22	nw (cattle)	45
m ³ s(t)	90-92	nwr (bird)	119
m ¹ w	73-74	nwr (aquatic animal)	144
myt - see m ¹ w		nwdw	22-23
m ¹ st - see m ³ s(t)		nb	110
mm	52-53,92	nfnf	149
nmy	26	nfrw (cattle)	34
mn ¹ t - see mnwt, mnt		nfrw (horse)	65
mn ¹ t	34	nf ¹ t	34
mnwt	130-131	nm	119
mnmnt	10,11-12	nn	
mn ^h	41	nnt	112

	<u>Page</u>		<u>Page</u>
nr	45	hɔrt	10
nrɔw - see nɪɔ(w)		hlw	67
nrt	125-126	hy - see hlw	
nh	133	hwn	143
nhbw	43	hwtɔ	143
nhɔw	45	hb	120-121
nhnh	135	hbn	24
nhnt	111, 135	hnn	25
nšmyt	15	htw	92-93
ngɔy - see ngg		htt - see htw	
ng(ɔw)	35-37		
ngg	111	hɔ	143
nrɔt	71-72	hɔy - see hɔt; also hɔyt	
		hɔɪt	117
r (goose)	109	hɔyt - see also hɔt (bird)	117
r (reptile)	17	hɔt (cattle)	45
r-hɔɔ	154	hɔt (bird)	127-129
rw	70	hy	119
~ ɔbw	70	hw	56
rwɔyt	38	hwɔ - see whɔ(t) (fish)	
rby	70	hwy	143
rfrf - see nfnf		hwyw - see hww	
rm(w)	14-15	hww	44
rn	38	hwnt	93
rny - see rn		hwr	166
rnɔ	41	hwt - (miswriting) see 'wt	
rnn - see rn		hwt (pig?)	82
rr - see rn		hwtɪ	143
rrɪ	81	hbɔ	140
rrw	17	hp	110
rrt - see rrɪ		hfɔw(t)	15-16, 17-18
rhn	83, 84	hfrn - see hfn(r)	
rhty	92	hfnw	151
rhyt	133	hfnnt	151
rht	133	hfn(r)	151, 152
ršɔw (bird)	119	hft - see hfɔt	
ršɔt (fish)	143	hm-psɔt - see hnt (pelican)(notes)	
rd	119	hmr - see m	(notes)
rdɪt	143	hms - see msh	
rdɔ	143	hmt (cow; female)	34, 93, 137
		~ wrt	34

	<u>Page</u>		<u>Page</u>
hmt (fish)	143	hḡr(t) (unknown)	96
hn	123	hḡt	43
hnn	77		
hnt (bittern)	120	hḡ... (?)	
hnt (crocodile)	154	hḡy	143
hnt (pelican)	123	hḡb	57-58
hnt3	94	hḡ(3)bs	117
hnt3sw	151	hḡr	112
hnty (see also hnt3)	93-94	hḡt	144
hntš - see hnt (bittern)		hḡtrw	98
hriw	12, 117	hḡd	39
hriw-hḡt.sn	17	hḡww	15
hrr - see also hrrt	160	hḡwrr	98
hrrwt	147	hḡpw	113, 126
hrrt	17, 160	hḡpr	157
hrrs(t)	40	hḡpn	143
hrt	115	hḡpt - see phḡt, hḡpw	
hrt	115, 123	hḡmy	163-164
hr-db	42	hn	98
hsbtt	148	hnws	163-164
hsk(m)t	140	hnms - see hnws	
hst - see sh(3)t	85	hnn	15
hkwn - see hḡpr		hnnt	12
hknw	77	hnty	154
hkn-m-bs.f	77	hnty-t3.f	77
ht	112	hnd - see also hnty	154
hty	94	hr(y)t	44
htb	94-95	hrp (cattle)	45
htm	112	hrp (insect) - see hḡpr	
htmt	95-96	hs(p)r	161
htr (cattle)	43	hsf	132
htr (horse)	63-64	hsmt	45
htw - see ht		hstt - see hsdd	
hts	96	hsdd	49, 99
htt (baboon)	77	ht	150
htt (hyaena)	53	ht'3	112
hdkk	96		
hd (goose)	110	h3(y)t	140
hd (oryx) - see m3hd		hnm	13
hḡr (pig?)	82	hnmw	10
hḡr (maggot)	149	hry	123, 124

	<u>Page</u>		<u>Page</u>
hr-mryt	154	snhm	162
s (bird) see also sr(y)(t)	120	sr (duck) - see s	108-109
s (fish)	143	sr (goose) - see r	
s3 (bird) - see also st	109	sr (verb)	26-27
s3 (fish)	143	sr(t) (sheep)	83-84
s3b	46,47-49	sr(y)(t) - see sr (duck)	
~ šm'	48-49	sr(w) (goose) - see r	
s3bw	132	srw (animal)	100
s3bt (cattle)	43,85	srftt	149
s3bt (snake)	150	srk	144
s3r	141	srdf	137
s3hmw	28-29	sh(3)t - see also hst	65,85
s3š	166	shyht - see also shh, sht	166
s3-t3	150	shh	123,124
sł3	129	shsh	123
s'š3 - see also 'š3, st-'š3	132	sht	123
sw (bird)	115	shywt	137
sw (fish)	143	shtt	157
swy	154	sh't	100
swr	143	ssmt	63-64
swrw	134	sst	110
swtt	137	sš3	131
sb	166	sšmty	132
sbnw	144	sšnw	15
sbnt	35	sk3	43
sbh	115	skm	135
sbhyt	45	sknks (demotic)	150
sp	164	skt	65
spyw	149	st(y)	109-110
spks	99	st-'š3 - see also 'š3 (bird)	132
spd	149	stp	112
sft	123	sth - see sdh	
sm3(t)	44	stpw	143
smłw	12	sd	120
smn(t)	111	sd-hwtł - see hwtł	
smr	99	sd3 (demotic)	162
sms	14,138	sdnf	27
snbtt	99	sdrw	15,16
snfrw	135	sdh	123
snmnty	100	š...m	101

	<u>Page</u>		<u>Page</u>
š3	47,82	ḵdt - see ḵb3yt (insect)	
š3ḷ(t)	81		
š3w - see rš3w		k3 (bull)	33-34,110
šʿt	143	k3 (snake)	150
šw	66	k33	166
šwšt	101	k3yt	79
šbd	122	k3wty	79
špnt	143	k3pw (bird)	119
špt	139	k3pw (crocodile)	154
šf - see šfn		k3r3	151
šfn	126	k3k3	145
šft	83	ḵy	165
šm	132	kyky and varr.	75,78
šnḷ	154	kīmḷ (demotic)	135
šnʿ	143	kīry	101-103
šnbty	127	kps	105
šnty	119	kmy	150
šs3w	22	kmt	43
šspt	101	kn...	105
šsr (cattle)	44	knmt (canid?)	49-50,103-105
šsr (monkey)	79	knmt (bird)	137
škb	56	krḷ	123
štbt	101	krḷw	79
št	101	kkt	105
šṭw (šṭwy)	155	kṭt	164
šttwt	156		
šd - see ʿd		g3	121,122
šdy	143	g33bt	112
		g3w	65
ḵ3d	137	g3bgw - see gbg3	
ḵ3dyt	105	gḷf and varr.	78-79
ḵwḷ	143	gw - see ng(3w)	
ḵbh	13	gbw - see gb(b)	
ḵbk	137	gb(b)	111-112
ḵnd (verb)	79	gbg3	137
ḵrr	152	gmḥsw	126-127
ḵrkṛ	137	gmt	120
ḵḥwt	106	gnw (sheep) - see also ng(3w)	85
ḵsnw	134	gnw (bird)	134
ḵḵ	133	gr	15
ḵdm - see ḵdt		gry	132

	<u>Page</u>		<u>Page</u>
gr-(m)-pt	132	d3gy - see dgyt	28-29
gh - see ghs	106	d1wty	119
ghs	20-21	db	56-58
gs1	20	dpy (fish) - see tb	
gsfnw	106	dpy (crocodile)	153,154
gst	143	dm	149
gg3	106	dnm	149
		dnhr (demotic)	56
t3	27	drgyt - see also dgyt	123,124
t1w	125	d3r (cattle)	43
t1wd	106	d3r (flamingo)	122
t(w)t-mrwy - see mrwryt		d3rw (fish)	140
tb	15	dgyt - see also d3gy	29-30,123
tpy(w)(t) - see tb		ddwn	137
tp-n-13wt - see also 1wt	10,11		
tfnyt	123	d3n(?)	116
tfnt	168	d3rt	166-168
tm - see dm		d3t	121-122
tmt (not an animal name)	144	d1wt	143
tnyt	123	dwt	137
tnbh	106	dwt	163,164
tnhr - see dnhr		db	133
thn	120-121	dbnw	22
tk3 - see t3	107	dprm	107
tkkt	161	dms	123,124
		dnw	110
t - see trp		dnf	151
t3	138,152	dnd	116
t3yt	107	dndn	110-111
tnnw	45	dri	128
tp - see trp		drw	128
tnwt	45	drt (cattle)	40
tnhr	126	drt (bird)	127-129
tn	123,124	drty	128
tnnt - see tnwt		dhdh	77
trp	110	ds(s) - see dsds	
tsm	50-52	dsds	143
tssw - see dsds		dt	149,150
tst	10	dt3t	129
tt	136	ddb	143
ttt	168	ddft	15-16,17-18

	<u>Page</u>
..3(rw?)	73
..ky	23

- bear - see htmt
- ichneumon - see mongoose
- mongoose - see 'd
- mouse - see pnw
- otter - see 'pnnt, h3trw
- ratel - see št
- shrew - see h3trw
- weasel - see lnh
- zorilla - see gsfnw

